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THE DOCTOR:

A MONTHLY REVIEW

OF

BRITISH AND FOREIGN

MEDICAL PRACTICE AND LITERATURE.

FROM JANUARY TO DECEMBER,

1875.

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TO CORRESPONDENTS.

. We beg to thank those gentlemen who have, during the past, kindly furnished us with abstracts of their lectures, communications to societies, contributions to journals or other productions, and to say that such abstracts will always receive attention.

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THE METROPOLITAN HOSPITAL SUNDAY FUND.

The Council of the Hospital Sunday Fund met at the Mansion House Wednesday fortnight, under the Presidency of the Lord Mayor, to receive the report of the Distribution Committee and the results of a second appeal to the public. This year's collection was an undoubted success; the clergy entered more warmly into the work, and nearly 200 more places of worship were preached in than in the previous year. The aggregate collection amounted to the sum of £29,678 13s. 2d. The school children contributed a sum of £77 10s. 7d., while the collections from workmen and workshops brought in £1,434 13s. 10d., a larger sum by upwards of £2,000 than that of 1873. This is very encouraging, and plainly indicates that we may now look upon the fund as a permanent institution of the metropolis.

The expenditure, including all charges incidental to the collection and distribution of the fund, as well as the cost of working, printing, and advertising, amounted to £926 17s. The total expenses of the year were nearly 3½ per cent. on the sum collected, a comparatively small amount, when it is considered that the labour is continuous and occupies the whole time of a permanent secretary, as well as much of that of the honorary secretaries, and which is always ungrudgingly and freely given to the work in hand. We have but one fault to find with these gentlemen, and it is that they neglect to call the Council together to receive the reports of the Distribution Committee and of the General Purposes Committee before the awards are made known to the general public, and the final report printed off for distribution. We look upon this as a decided error of judgment on the part of the secretaries, for two reasons—the first, that the Council should be asked to share in the responsibility of the Distribution Committee; and the second, that before the report is printed off and made public, it should be discussed and settled by the Council. On the present occasion, the greater part of the report appeared in the columns of a morning contemporary before it was sent out to the Council. This is scarcely as it should be; nor is it consistent to allow so long a time to elapse between making the award and the presentation of the report, as the Council are thereby placed in a difficulty, and are unable to meet outside appeals, or expressions of disapprobation. With regard to the awards made to the various hospitals and dispensaries, there cannot be a doubt, looking to the rules laid down for the guidance of the Committee, that every endeavour has been made to arrive at a just and equitable distribution of the fund. Certainly, on the whole, a very small amount of dissatisfaction has been expressed. It is scarcely in the nature of human institutions or works to give universal satisfaction, and the claims urged by hospitals as those for incurables, and others partaking more of the character of asylums, and affording admission only by a very questionable mode of election, and administering funds for the relief of poverty, rather than for the temporary aid of accidental and remediable disease, were very properly omitted from the list of recipients.

No one will regret to find, also, that such societies as the Truss Society did not participate, as most of them are unable to expend the funds subscribed upon the legitimate objects of the society, and in our opinion very improperly accumulate funded property. With regard to the awards made to the general hospitals, which stand open day and night for the relief of all kinds of suffering, and whose claims to consideration are in every way paramount, only one of their number, the Metropolitan Free, had a complaint to make of the smallness of the award. In this instance it appeared that it was solely due to excessive cost of management—16¾ per cent. upon the cost of maintenance of the patients. If the Committee had acted up to the letter of their instructions it would have made no award at all to the Metropolitan Free Hospital, for, as compared with the larger hospitals, its executive, or management expenses, are out of all proportion to what they ought to be. In this instance, then, the Committee may be congratulated, and by consistent firmness, the public will in time learn to look upon their decisions as testifying to the good and faithful management of the institutions placed on the list of recipients.

The dispensaries this year, in accordance with the instructions given, received awards calculated on bases corresponding to those on which awards to the hospitals were determined. The Provident Dispensaries, however, were, it was thought, rather hardly-treated, inasmuch as deductions were made on account of the payments of patients. This, it was contended by Sir Charles Trevelyan and others, was clearly wrong, as the awards should have been made on the whole of the receipts derived from all sources, as in the case of hospitals. It was fairly admitted that there were blots in the rules laid down for the guidance of the Committee and which it is not always easy to act upon or explain: take, for example, the case of the East London Children's Hospital, which received this year at the rate of £11 4s. per bed occupied (higher than most of the general hospitals), whilst the total cost of each in-patient per month averaged £8 17s. On the other hand, the Evelina Hospital was awarded £6 19s. per bed occupied, whilst the average total lost was under £4.

Then, again, we have in some instances great extravagance of maintenance, with high cost of management—as in the case of the Cancer Hospital, whose average cost per bed Mr. Wilkinson sets down at £123 14s. 3d., as against the average of Guy's, £47 18s. 7d. In truth, extravagance in maintenance makes a high cost of management appear less than it is. We quite agree, however, with the proposition that management expenses should be kept down, but at the same time we wish to insist that both should be carefully compared with the amount of *real work* done, rather than with some other item which may of itself be an extravagant one. For example, we are told that a certain hospital's management expenses are only 10 per cent. of its maintenance, when upon a more careful examination we find that its maintenance expenses are at least 50 per cent. more than another well-managed hospital, and therefore the two items together are much higher for the work and good done than they should be. Surely this is not the kind of economy which deserves to be highly rewarded? We heartily rejoice then to find that before the Council broke up it passed a resolution which we trust will guard against a possibility of error in future years. It was to the following effect:—

"That, with reference to the work of the Distribution Committee for 1875, the Council thinks it advisable that the basis of the awards should be clearly understood both by contributors and by hospital managers, and that for this purpose a Committee be appointed consisting of the late Distribution Committee, with an equal number of gentlemen representatives of various hospitals to define more accurately the principles upon which grants from the Hospital Sunday Fund should be given or withheld, and to embody these principles in explicit rules to be made public, and to be of such a nature that no difficulty would be likely to arise in their practical application."

CHRONICLE.

DR. ALLIS, OF PHILADELPHIA, ON CHLOROFORM.

DR. ALLIS (*Philadelphia Medical Times*, Dec. 5) says that Professor Gross is a firm believer in the superiority of chloroform over all other anæsthetics. He entrusts his assistant entirely with the management of the chloroform, and impresses on him that it is his sole business to look after the effects of the inhalation. Hence he, Dr Allis, as assistant to Professor Gross, in the Jefferson Medical College, had in all his service only one instance of apparent danger in administering the anæsthetic. He observes that the rules in giving this inhalation are—1. Never to be in a hurry to effect anæsthesia. 2. Never to use a large quantity when the patient is nearly influenced. 3. Never to use a small vial, from which a small quantity can be dropped, and that quickly. He uses a tin inhaler of the form of two cones one above the other, the former being of small size. The safety in giving chloroform does not reside in the inhaler, but in the administrator. He thinks, however, that it is safer to produce anæsthesia by an equal and constant supply of chloroform, drop by drop, than by pouring it on at intervals, and in half drachms at a time.

Ether requires a larger evaporating surface, and Dr. Allis has devised a kind of network covered with linen to give the necessary evaporating surface. He usually supplies the ether from a graduated bottle. At first he sprinkles only a few drops on the apparatus, and when deep inspirations ensue he pours on the ether in a small stream and then in a large stream, when the patient is anæsthetised in from three to ten minutes. He usually requires less than two fluid ounces of ether for adults, and rarely three ounces. If a sponge be used for ether, the coarser it is the better. There is but one safe posture when chloroform is given, that is the reclining.

DR. GERHARDT ON PHTHISIS.

DR. GERHARDT (*Deutsche Z. f. pr. M.*, No. 43) says that it will be found that in phthisis a very large number of patients are for a time free from fever, whilst others, on the slightest occasion, have a high temperature. If the temperature be taken every three hours, the fever is observed to be of the intermittent type in most cases. Towards the end of the disease, the morning temperature may sink to 97° F., at other times the morning temperature is the highest. The remission of the fever occurs generally during the hours from midnight till morning, the temperature rising in the forenoon, and reaching its maximum towards evening. The daily chill of many consumptives corresponds to the rise, and the night sweats to the fall, of the temperature. During the fever the vascular pressure diminishes, the arteries relax and widen, and there is a retention of water in the system. *Vice versâ*, during the remission, the vascular pressure increases, the arteries contract, and the surplus quantity of water is eliminated in the form of profuse sweating. Now, in many consumptives there is a morbid friability of the smaller blood-vessels, which are just able to resent the diminished vascular pressure during the fever, but not the increased pressure during the remission, hence rupture and hæmorrhage ensue. To this fact the author attributes the nightly attacks of hæmoptysis occurring in two of his patients for several nights in succession.

The patients were sleeping quietly and perspiring freely when they were suddenly awakened by a desire to cough, accompanied by the expectoration of bright red blood, varying in quantity from a tablespoonful to a small spittoonful. The average quantity each time was from three to six ounces. These hæmorrhages were distinguished by their regular return during the remission of the fever at night, and the author therefore justly terms them attacks of nightly intermittent hæmoptysis. In the above cases the usual hæmostatics were given in large doses, as tannin, ergot of rye, mineral acids, and inhalations of chloride of iron, but without success. The hæmorrhage was then stopped at once by large doses of quinine, 15 grains to a dose.

INOCULABILITY OF ECTHYMA.

DR. VIDAL, of the Hôpital St. Louis, of Paris, has sent to the Acadamey of Medicine a memoir as to the inoculability of pustules of simple ecthyma. The idea of his researches was given by Leclerc, his assistant at Tours Hospital, who several times in his presence inoculated, not without success, the pus taken from pustules of ecthyma. He concludes that the pustules of ecthyma, of typhoid fever, and those of simple ecthyma, are auto-inoculable. The inoculated pustle follows in the phases of its development a progress identical with that of the spontaneous pustule. On the first day, some hours after inoculation, we see at the point of the inoculation a red point, already somewhat hard, and which is generally rather itchy; on the second day the redness extends to the diameter of about a centimetre, and a hard kernel follows; then the redness extends, and the kernel points, and there is formed a little vesicle containing a muddy serosity. The liquid taken from this second generation is also auto-inoculable; but the activity goes on diminishing in the successive attempts, and leaves at the third or fourth generation.

TREATMENT OF DIPHTHERIA AND SCARLET FEVER.

DR. G. MEYER (*Jah. f. Kinderh.*, vii., 4) is strongly in favour of the treatment of diphtheria by ice. Even in children under one year he directs small pieces of ice to be put frequently into the mouth, followed, if possible, every minute or two by a teaspoonful of iced water. The ice must be pure, and therefore all artificially prepared is best. In severe cases the external use of cold, by means of an ice-bag applied round the throat, is very useful. The author has found that by this mode of treatment the fever soon diminishes, and the diphtheritic membrane is detached and expectorated. It is only in exceptional cases that the disease extends nevertheless to the larynx. But in one case the author was obliged, in order to reduce the temperature, to resort to cool baths. The latter he also found very useful in scarlet fever. Whenever the temperature exceeds 102° in scarlet fever the patient is to be placed for ten minutes in a bath of a temperature varying from 93° to 73°, according to the intensity of the fever. The effects of these baths in reducing the temperature lasts for two or three hours.

DISPLACEMENT OF SPLEEN.

DR. PEROTAIS (*Med. Cent. Zeit.*, No. 86) says that sudden displacement of the spleen is a rare occurrence, but it may occur. A lady, æt. 35, was injured by a fall from a waggon, which produced great pain in the left hypochondrium, vomiting, and inability to move. A tumour was found at the seat of pain, to which the practitioner in attendance applied leeches, with mercurial ointment, but the pain and vomiting continued. Six weeks after this he found a somewhat movable circumscribed tumour in left iliac region, six inches in length and three and a half in breadth. Pulse 80; temperature normal. He diagnosed the tumour to be the spleen, and returned it to the left hypochondriac region, retaining it there by a compress and a firm binder, after which the patient had less pain, and the vomiting left off. In a few days she was able to leave her bed, and was convalescent.

GONORRHŒA IN A CHILD AGED THREE YEARS.

DR. ALFRED FOURNIER (*Dr. Championnière's Journal*) relates the case of a little boy, aged three years, affected with severe urethral gonorrhœa, obtained from a girl aged twelve, who had played with the child, and who was found to be suffering from vulvitis. The gonorrhœa in the little boy was cured with difficulty in three months, and in spite of baths, cubebs, and sandal wood. The child was cured by a sugary preparation of cubebs, which the child consented to swallow without disgust. It was found that large doses of copaiba and cubebs were well supported by the little boy.

PERIPLEURITIC ABSCESS.

IN the *Deutsches Archiv. für Klinische Medicin*, Professor Bartels gives an account of some cases of peripleuritic abscess, and makes some observations on diagnosing between primary peripleuritic abscesses and empyema. Subpleural abscesses have but little tendency to burst into the pleural sac; they are often implicated with diffuse nephritis, and also with pericarditis. In both subpleural abscess and empyema the diseased side of the chest is enlarged, acts imperfectly or not at all in respiration, gives a dull or empty sound on percussion; the vocal fremitus and vesicular breathing are lost over the region of dulness. In empyema, however, the ribs in the whole region of dulness are pressed outwards equally, and all the corresponding intercostal spaces are distended; while, in peripleuritic abscess, some of the intercostal muscles are more rapidly infiltrated with pus than others, so that the spaces gape more widely, and the ribs project, while other (upper) ribs are pressed closer together than those on the sound side. This is not the case when an empyema has perforated the costal pleura. In subpleural abscess the extent of dulness is not affected by the position of the patient or by the ascent or descent of the diaphragm. A similar position to that of subpleural abscess may supervene when a pleuritic exudation is encapsuled between the upper and lower lobes of the lung; here, however, the lower lobe is compressed, and takes no part in respiration. In subpleural abscess the neighbouring organs are not pressed on; in only one case the heart was pressed out by the exudation in the mediastinum. In every case fluctuation was detected in one of the intercostal spaces, with tension diminished during inspiration, and increased during expiration. In empyema these symptoms are observed only when the costal pleura has been perforated. Professor Bartels says that the pus of a peripleuritic abscess has a higher specific gravity (1·042) than that of empyema (1·028 to 1·032). The prognosis is unfavoure able. Of eight cases four died (two of pyæmia, one of nephritis, one of pericarditis). In two cases of recovery there was marked contraction of the affected side of the chest. In the treatment the pus must be let out as soon and as completely as possible, in order to prevent a purulent infiltration from extending. Puncture is not sufficient, and is even dangerous; the pus must be let out by a broad incision. In some cases further incisions are required, and drainage is useful. If the pus have an offensive smell, Dr. Bartels recommends that the abscess be washed out with a mixture of equal parts of fresh filtered ox-gall and water.

ORIGINATION OF GLYCOGEN IN THE LIVER.

DR. G. SALOMON (*Virchow's Arch.*, vol. lxi., Sept., 1874) made experiments which led to these results: The liver of live animals contains sugar. Gelatine is a producer of glycogen. The same may be said of olive oil, but it is less powerful. Though it was believed of late that muscle substance and fibrine act in the same way, the author says they are not of any importance, but found gelatine a producer of glycogen. Of the different kinds of sugar, milk, fruit, grape, and cane were proved to be originators of glycogen.

EMBOLIA.

DR. ANDREE, of Breslau (*Virchow's Arch.*, Sept., 1874), says that of late several facts have become known which tend to show that cells of an original tumour conveyed by the blood to distant organs may give rise to a new tumour. Such cases are given by Aker. Cells of a tumour were growing into larger veins, and caused subsequently a thrombosis of them. A young man, æt. 20, in October, 1873, was received into hospital with supposed cystitis and stricture. Formerly he had suffered from gonorrhœa and pain in right hip-joint downward to right knee-joint. A catheter was passed, and his health improved, and he complained only of pain in the right thigh. Three weeks after this he suffered for two days from pain in the chest, and from fever. Up to the middle of November the pain in the leg increased, especially at night, when a large tumour was discovered in the right sacro-iliac symphysis, and another in the right iliac crest. He shortly died, and a sarcoma of the pelvic cellular tissue of the ilium, sacrum, and gluteal muscle was found, with sarcomatous thrombosis of pelvic veins, embolic infarctus in both lungs, hæmorrhage, pleurisy, fatty heart, metastases in the liver, sarcomatous infarctus in spleen and kidneys. The sarcoma was a round-celled one. The different localisations of the tumour could be traced by the author to depend on penetration and development of elements from the original tumour.

MUSCULAR CHANGES IN CONTAGIOUS DISEASES.

DR. LEO POPOFF, of St. Petersburg (*Virchow's Arch.*, vol. lxi., Sept. 3), says that in the course of some zymotic diseases great changes were observed in the structure of the various tissues of the body, especially of the muscles. Virchow's attention was called to the condition of the muscles in typhus. He observed in them parenchymatous inflammation, and an increase of the nuclei, besides a cleavage of the muscular substance into homogeneous flakes. Some years after this Lenker published observations on this point. The changes which he often observed in the muscular fibre he called waxy *degeneration*, and denied that it was inflammatory. He thought that a regeneration of the muscular fibres, which were altered in consequence of waxy degeneration, does not take place from the remaining fibres, but as a secondary process, from the connective tissue surrounding the fibres.

Waldeyer examined the condition of the muscles in relapsing fever, typhus, puerperal fever, and cholera. The most common changes appeared to be parenchymatous inflammation and granular metamorphosis. These were developed most completely in cholera and puerperal fever; next in typhoid fever, relapsing fever, and typhus; but in these they were combined with waxy metamorphosis. An increase of nuclei in the muscular fibres was observed to take place in the granular metamorphosed fibre, but it was found by the author that it occurs oftener and more intensely in waxy metamorphosed fibres. The newly-formed elements in the muscular fibres resemble either the muscular nuclei with their nucleoli, or are somewhat larger, especially at the beginning of the process. Afterwards they assume a waxy lustre, like the metamorphosed fibres themselves, and are only with difficulty distinguished from them; besides, they are yet surrounded by protoplasm, which has likewise become waxy.

MELANÆMIA AND MELANOSIS.

PROFESSOR ARNSTEIN, of Kasan (*Virchow's Ar.*, 4 Oct., 1874), mentions that pernicious fevers are endemic in Kasan, and often accompanied by melanæmia. The heart and large vessels contain pigment only when death occurs soon after an attack supervenes, while the capillaries of some organs often contain such even after months. The pigment in the blood is black, or dark brown, and appears in little angular granules, which are nearly as large as red blood-corpuscles. In most cases pigment is enclosed in white blood-corpuscles. The principal localities in which pigment accumulates are the spleen, the liver, and the spinal cord. The last named locality was stated by the author to be a depository for pigment; the others were known to be so. The author found that the pigment is deposited in the spleen next to the arteries, in still larger quantities around the veins and in the pulp of the spleen. It is distributed in the liver generally over the whole acini—sometimes only to the portal and arterial vessels. The colour of the liver pigment is not black, but yellowish brown. Considerable quantities of pigment are found in the medulla, the larger part in its tissue. The melanotic part contains little of fatty matters; its colour is reddish brown. The other organs contain little or no pigment. Melanæmia exists only a short time after the fever attack; therefore the melanotic spleen cannot be the source of infection for the blood, as there is otherwise no reason why the blood does not always contain pigment. The author compares the distribution of pigment with that of artificially injected pigment (cinnabar) which is in a similar manner deposited. He explains the origin of melanosis thus: A number of red blood corpuscles decay during an attack of fever, the resulting granular pigment is then taken up by the white corpuscles, which are arrested in their organs when the rapidity of the circulation is diminished, as in the liver, when the blood in the portal vein has already passed through the capillaries.

NEW METHOD OF ELECTROLYSIS IN GLANDULAR TUMOURS.

DR. MORIN-MEYER (*Berlin Klin. Woch.*) employs the induced current instead of the continued current for the electrolysis of glandular tumours. With a powerful apparatus, the result in one case was that a tumour the size of a prune divided itself into three in a short time. In another case, seen also by Dr. Reiter, the tumour became soft in two minutes, and divided into three equal parts; a few sittings sufficed to complete the cure.

ABSENCE OF THE BLADDER.

IN the Paris *Journal de Médecine et de Chirurgie* (December number) is reported a case under the care of M. Fleury, read by him before the Surgical Society of Paris, in which passing a catheter caused peritonitis, which was followed by death. The patient, a young girl, had been affected with retention of urine for a year. She had menstruated for two years. M. Fleury passed a catheter with every care, which, nevertheless, caused much pain, but could not pass it in for more than four centimetres. Nothing particular could be detected on digital examination. Very acute pain in the abdomen was experienced on the following day, and peritonitis supervening, the patient died on the eighth day. At the autopsy no trace of a bladder could be detected. The ureters were found to open into a *cul-de-sac* formed by the urethra. The retention of urine was also found to be congenital.

TRANSMISSIBILITY OF TUBERCULOSIS.

A writer, R. M. B., in the *Philadelphia Medical Times* of Dec. 5, speaks as follows on this subject:—The transmission of tubercle has been likened to a process of grafting; but how can such a process explain the myraids of tubercular granules which stud the parenchymatous and serous organs, says Villemin? Grafted tissues continue to to live and develope at the places where they are deposited, but are not reproduced elsewhere. This theory, at the most, could only explain the development of the tubercle at the seat of puncture; and even then the inoculated tuberculous matter, to do this, must be endowed with a very active vitality. But the softened matter in the centre of a tubercle does not even contain any distinct elements; we inoculate only with a detritus. How can grafting explain the successful inoculation with sputa—sputum which has been dried for twenty days? Demet, Pararkey, and Zallories, of Syra, in Greece, not content with success in transmitting this disease to rabbits by inoculation with the sputa and blood from a man affected with phthisis, performed the unprecedented and not to be repeated experiment of inoculating a human patient whose history afforded no suspicion of a tuberculous taint, and whose lungs were perfectly healthy, but who was suffering from gangrene of the big toe of the left foot, due to femoral embolism. Amputation of the limb would not be submitted to, and, as a fatal termination was inevitable, a quantity of sputa from a man with abscesses in his lungs was inoculated in the upper part of the left thigh. In three weeks auscultation revealed slightly increased respiratory murmur at summit of right lung, and prolonged expiration. Thirty-eight days after inoculation the man died from gangrene, when it was found that the upper right lobe had seventeen tubercles of a grey colour, and very hard. There were two granulations in the apex of the left lung.

SUPPURATIVE OVARITIS.

In the *Philadelphia Medical and Surgical Reporter* Dr. W. W. Munson, of Otisco, New York, reports a case of suppurative ovaritis which was read by him before the Onandaga Medical Society. The disease was not diagnosed during life. The patient was a married woman, æt. 46, who had had one child. Menstruation had always been irregular, with profuse leucorrhœa at times. For a year past she had suffered much from symptoms of cerebral congestion, which were relieved by bromide of potassium. Last March she was attacked with severe colic, which was, however, soon relieved by hypodermic injection of morphia and atropia. Dr. Munson's diagnosis was gastralgia, as the pain and tenderness seemed to be chiefly at the scrobiculus cordis. This was followed on the next day by severe headache, which was also relieved by subcutaneous injection. On the 5th day from the first attack, the so-called gastralgia returned with great violence, but was, nevertheless, immediately relieved by the hypodermic injection. On the 8th day much bile was passed, *per ore et ano*, to such a degree that Dr. Munson considered the case one of biliousness. From this time she continued to improve for three weeks, when, on examining the abdomen, Dr. Munson discovered a hard tumour in the left inguinal region, but could not make out its attachments, as the abdomen was too tender on the right side to allow the necessary manipulations. The tumour appeared to be about the size of a fœtal head at full term, but not so tender, and the patient had not been aware of its existence before. On the 29th of March, nine days after the discovery of this tumour, a new feature presented itself in the discharge from bowels of a quantity of offensive purulent matter. This led to the diagnosis of *typhlitis*, as the soreness had so long been low down in right lumbar and inguinal regions. It was concluded that the inflammation had passed on to suppuration, opening into the cæcum. Large enemata given, and continued twice a day as long as they brought away any offensive matter.

From this time she improved slowly till the 25th of April, when she was suddenly attacked with a severe chill at about noon, pain, and collapse. Death ensued in thirty hours.

At the autopsy, sixteen hours after death, recent general peritonitis was found, the lymph beginning to agglutinate the bowels. A sero-purulent fluid oozed up in every direction among the abdominal organs, but there was no very large quantity in the abdominal cavity. The cæcum and its surroundings were found perfectly healthy, with the exception of the peritonitis, which was general. The right ovary was discovered to be the seat of suppuration and rupture. The organ was converted into a sac of pus, of about four fluid ounces capacity. Somewhat over half the contents had escaped into the peritoneal cavity. Below and behind this larger sac of matter was a small empty sac, probably a small portion of the ovary that had suppurated previously and opened into the rectum on the 29th of March. This was doubtless the source of the purulent fæcal discharges at that time, though search for the opening was not made. The tumour in the left side was found to be an interstitial uterine fibroid, developed in the anterior wall, and tilted over into the left iliac fossa. Cavity of uterus not much enlarged. Neck of womb considerably elongated. There was no pelvic cellulitis, no pelvic peritonitis which appeared to have existed previous to the rupture except that in the immediate vicinity of the diseased ovary, which appeared to be older than the general peritoneal inflammation; but this is easily accounted for by the extension of the disease from the ovary.

HYPODERMIC INJECTIONS AS EXCITANTS.

M. Charcot has lately called the attention of his class to the fact that certain patients have become addicted to the use of hypodermic injections of morphia for the sake of the species of intoxication produced. They originally learn its use in disease, much as many opium-eaters have done. In one case he found that as much as two grammes (= about thirty English grammes) had been taken by a lady in the course of a week.

THE STRUCTURE OF TUMOURS.

In some observations on the structure of tumours, published in the *British Medical Journal*, Mr. W. S. Savory, of St Bartholomew's Hospital, says that the tissues which are simplest in structure and mode of development are most apt to form the substance of tumours. The most elaborate tissue in these respects—striated muscle—is rarely found as a distinct morbid growth, and it is rare to find even unstripped muscle as a separate mass in the substance of tumours. In the elementary structures of tumours, there is an inverse ratio between the tendency to progressive metamorphosis and the tendency to reproduction. The less the structures of which a tumour is composed tend to change from their primary or embryonic form, the more abundantly will they multiply; so that those tumours whose structures retain most nearly their primary form are the most malignant. And, as the structures of a tumour are capable of transformation, so do they lose their power of repetition; so that those tumours which consist most completely of fully formed tissue are the most innocent.

Mr. Savory objects to the use of the term sarcoma which, he says, is very unfortunate—firstly, as reviving an old term once vaguely applied to all sorts of tumours about which nothing was known; and secondly, as being either quite meaningless, or, if it means anything, as tending to mislead.

EXCISION OF THE LOWER JAW.

IN the *British Journal of Dental Science*, for December, a case of excision of the lower jaw, and mechanical restoration, is reported by Messrs. N. C. Dobson and T. C. Parson, Surgeons to the Bristol General Hospital. The case commenced with a small swelling outside the angle of the right lower jaw, which caused difficulty in opening the mouth. This swelling became worse, and the second molar tooth on the right side was removed, when some clear fluid escaped. This did not cure the swelling, which increased gradually in size until March, 1874, when she was admitted into the Bristol General Hospital, under the care of Mr. Dobson. There was then a large swelling occupying the whole of the side of the ramus and part of the body of the jaw, together with indistinct fluctuation, especially marked when one finger pressed the tumour externally and another finger was placed over the vacant socket of the second molar. In other situations the tumour was very firm and bony. The patient had never cut her wisdom tooth on this side. She could open her mouth so as to admit the finger readily. An opening into the tumour through the alveolus was then made through the socket of the second molar; some fluid escaped, but the swelling did not diminish in size, and remained as firm as ever. A drainage tube was inserted through the opening and brought out at the back of the angle, passing between the plates of the ramus. This was kept in a month, and excited considerable suppuration, but did not lessen the size of the swelling. By September the swelling had increased considerably in size and was causing pain. It was then decided to excise the half of the jaw. Mr. Dobson disarticulated at the condyle and sawed through the bone at the second bicuspid. The coronoid process was so expanded and rounded as to fill the zygomatic arch, and render depression of the bone prior to disarticulation extremely difficult. The swelling proved to be a dentigerous cyst, the bony walls of which were nearly a quarter of an inch thick. On sawing through the bone vertically in an antero-posterior direction, there was discovered embedded in the bone the wisdom tooth, fully developed and normally situated, though non-erupted; the cyst cavity was small, capable of holding half an ounce; the walls extremely dense and resisting in every direction.

In making an artificial substitute for this patient it was necessary first to replace that portion of the lower jaw which had been excised, and then to restore the remaining portion to its natural position. As the inferior maxilla had now only one articulation, the muscles attached to the lingual surface and the hyoid bone drew the body of the jaw downwards and inwards so as to prevent the lower teeth from meeting the upper. A vulcanite splint was applied temporarily, so as to prevent contraction of the muscles until proper impressions could be taken of both upper and lower jaws. A plate of dental alloy was fitted to the lower model and secured in position (all the remaining teeth being present) by means of a cap, which was passed over the first molar and thus acted as a clasp to that tooth, and kept that side firmly in its place. A second fastening was brought round the neck of the first bicuspid on the canine, and a cap was brought between these two teeth to prevent the plate from working down into the cheek and gums. The plate was now put back as far as possible with a vulcanite block, and made to meet the upper teeth. The coronoid process and condyle, which had been removed, were then artificially replaced, in order that the jaw might be forced back again into its natural position, and brought into use for mastication. A plate was fitted to the upper jaw, with clasps round the molars as usual (replacing at the same time some teeth which were missing on the left), and extended beyond the wisdom tooth on the affected side to form an attachment for a lever, the action of which should take the place of the articulation of the bone with the glenoid cavity, and connect the two frames together. The other end of the lever was fastened to the lower plate as far forward as the second bicuspid. The upper plate being fitted first, the lower jaw was brought forcibly forward and secured to the lower frame, which was held by it in position against the upper teeth, as they were before the operation. The contour of the face was quite restored and articulation and mastication rendered perfect.

BURNS AND SCALDS.

DR. J. MORRIS, in the *Sanitarian* (December number), makes some very useful remarks on burns and scalds and their treatment. He characterises the old method of treatment with carron oil as crude and useless. In Dr. Morris's opinion it is not so important to consider the mere local treatment as the general management of the sufferer at the time of the accident. For burns of the extremities, Dr. Morris says, no immediate application is so serviceable to relieve pain as hot or cold water, and, strange to say, they act equally well. The cold bath, as practised by Hebra, is best, if appliances are at hand. Carbolic acid has been much commended as a local anæsthetic. Possibly a solution of it in water, in combination with morphia, might act still better. All earthy applications, such as chalk, calaminaria, &c., should be avoided, as being not only therapeutically inert, but also antagonistic to the process of restoration. Local stimulation, such as the application of turpentine, or a solution of nitrate of silver, as practised at St. Bartholomew's Hospital, may be proper treatment in the second stage of burns.

Dr. Morris sums up as follows the chief suggestions he makes in the course of his paper:—

First. Remove the clothing by cutting it from the body.

Second. Wrap the patient in blankets.

Third. If pain be excessive, administer chloroform, ether, or large doses of opium, and let the necessary dressing be made while the patient is in a state of partial or total insensibility.

Fourth. Produce anæsthesia of the burned or scalded parts by the application of a solution of carbolic acid and morphia. (This solution can be made in almond or olive oil.)

Fifth. After this, wrap the patient in masses of cotton batting.

Sixth. Avoid brandy, and give coffee as a stimulant.

We have no doubt that if these simple rules are only followed, much suffering may be relieved, and many lives saved that would otherwise be lost through the ignorance and mismanagement of attendants.

IDIOPATHIC ANÆMIA.

IN the *British Medical Journal* Dr. S. Wilks refers to a paper by Dr. Immermann in a late number of the *Deutsches Archiv. für Klinische Medicin*, in which Dr. Immermann relates the history of two cases which confirms, he says, the discovery made by Dr. Biermer of a disease which he styles *Progressive Pernicious Anæmia.* Dr. Wilks reminds the readers of the *British Medical Journal* that this is *not* a new disease by any means—that the disease is well-known in England, and that fatal anæmia is alluded to by most authors. Dr. Wilks heard a lecture on it by Dr. Addison in 1843, and himself published several fatal cases of the disease in the "Guy's Hospital Reports" for the years 1847-49. Addison alludes to fatal anæmia in his well-known treatise on the Suprarenal Capsules. In Dr. Wilks's own "Lectures on Pathological Anatomy," published in 1859, the following passage occurs:—

"We occasionally meet with cases of fatal anæmia where no disease is found in the body; patients, after being in an almost bloodless condition for some months, die, and all the organs are found pale, and some of them in a commencing state of fatty degeneration; there is also generally some exudation of serum into the serous cavities, as well as œdema of the lungs and other parts. I have now seen several of these cases (see "Guy's Hospital Reports," vol. iii.): the blood resembles pink water, containing no coagula in the vessels or the heart, and the latter organ exhibits the form of fatty degeneration, where the internal surface, especially the left ventricle, presents the peculiar mottling from change in the muscular fibre."

Dr. Wilks expresses an opinion that nervous shock may have been the starting point in the morbid process; but the German and Swiss doctors do not allude to this probable cause. Dr. Wilks says that most readers of the *B. M. J.* must be familiar with this form of disease, so that it is nothing new, and its discovery by two foreign physicians is the most remarkable point about it.

ABDOMINAL WOUND.

In the *Indian Medical Gazette* for Nov. 2 Assistant-Surgeon Cheytun Shah narrates a case of penetrating wound of the abdomen, with protrusion of the small intestine, which was treated with ice, carbolic oil, and opium, and recovered without peritonitis supervening. The patient, a Mussulman woman, was stabbed on the 23rd of June, on the right side of the abdomen, nearly midway between the last rib and the crest of the ilium. The wound measured 3½ inches in length. Nearly 3 feet of small intestine protruded. She was taken to the Peshawur City Charitable Dispensary four hours after the infliction of the injury, with the intestine strangled, congested, and slightly lacerated, probably through some unskilful attempts at replacing it. The pulse was very low, and the patient in great danger. The intestine was replaced after enlarging the original wound, and ice was applied to the part. Opium was administered internally at regular intervals, so that the pain was subdued, and not allowed to be felt. No indication of inflammation appeared, and on the 2nd day carbolic oil was substituted for the ice. No untoward symptom followed, excepting slight costiveness of the bowels, which was complained of, but was not interfered with for the first four days.

The wound healed favourably with little suppuration, and the woman was discharged cured, after about 3 weeks' residence in Hospital.

NERVE-SECTION IN NEURALGIA.

Dr. W. Mitchell (*American Journal of Medical Sciences*, No. 135) reports a case of traumatic neuralgia which was immediately and permanently relieved by section and excision of portions of the musculo-spiral and median nerves successively. The patient, when a child, had run a splinter of wood into the palm of the right hand, just over the point where the median nerve divides into digital branches. The splinter was not removed from the wound, which, nevertheless, healed quickly. Twenty years after, after some slight injury to the hand, constant pain was experienced in the hand and arm. The splinter was then cut down upon, and with some difficulty removed. When the patient recovered from the chloroform intense pain was felt in the hand, to such a degree as to produce protracted sleeplessness. No therapeutic means employed appeared to relieve the pain in the slightest degree; it was increased by pressure on the median nerve, but numbed by pressure on the musculo-spiral. The musculo-spiral nerve was then cut down upon, and an inch removed. The pain left entirely for eight days and then suddenly returned. It was now decided to remove a portion of the median, three-quarters of an inch of which was accordingly excised just below the pronator radii teres. Complete relief followed this operation, and the patient ultimately made a good recovery. There was very little loss of sensation in the hand. The portion of the nerve removed presented the appearance of Wallerian degeneration.

CYNARA IN RHEUMATISM.

~~Dr. E. Copeman writes in the *British Medical Journal* recommending the use of cynara in rheumatism.~~ As long ago as 1833 Dr. Copeman published ~~in the Medical Gazette~~ some cases of rheumatism treated with the common artichoke in the form of tincture and extract. The result was so encouraging that he has ever since employed the tincture and extract of cynara for the cure of rheumatism, with perfectly satisfactory results. ~~Having recently tried cynara in rheumatic fever and found it efficacious, Dr. Copeman now publishes in the *British Medical Journal* some further remarks on the use of cynara.~~ He says that in his experience no other medicine has appeared to be so efficacious in rheumatism as cynara, whether in the acute or the chronic stage. Dr. Copeman usually administers it in the following form:—

British Medical Journal

℞ Potassæ bicarb., ʒi.;
Aquæ camph. ad ℥viij.;
Tincturæ cynaræ, ℥i.;
Syrupi papaveris alb., ℥ss. M.

Two tablespoonfuls to be taken every four hours, with as much of the extract of cynara as would make two moderately sized pills. Lemonade is given to quench the thirst. Should the case prove obstinate, it is perfectly safe to increase the dose of the tincture gradually from one to four drachms. Although Dr. Copeman has found cynara, when given, to give such good results, he says that he has frequently heard of its having failed in other hands, and he suspects the reason to be that it is often prepared from leaves gathered at an improper time, when there is no medicinal virtue in the plant. He says that the leaves ought to be gathered "just before the top of the vegetable is fit for food, and whilst they are full of juice; if left until the top is cut off for cooking purposes, and the plant begins to wither, no good will be derived from it, and, if given, it would be condemned as useless and inert."

TOPICS OF THE TIME.

THE LIFE OF RICH AND POOR PEOPLE.

Among a great many excellent and well-meaning persons it has long been a settled conviction that outward circumstances have but little to do with individual happiness. "The back," say these persons, "is suited to the burden;" and, if we could see beneath the surface, they think it would be found that the lot of the poor is quite as good as that of their richer neighbours. Doubtless there is some truth, mixed with a great number of fallacies, in such exclamations. A poor man or poor woman, born on the lowest step of the social ladder, is of course not a thousandth part as miserable under the inevitable sufferings of his or her lowly position as rich people are when compelled to put up with such a lot. In this light it is that the wind is tempered to the shorn lamb.

But when we calmly contemplate the real facts disclosed by statistical inquirers relating to the lives of persons low down in the scale of wealth, and compare them with those found as exhibited in the lives of the wealthier classes, we cannot fail to be at once struck with the terrible inequalities of human life. In every constituent of human happiness we find the lot of the poor immensely wanting when weighed in the balance with that of the rich; and as happiness is the great sustainer and promoter of animal existence, the result is, what might easily have been foreseen—namely, that the rich live very much longer lives than the poor.

This fact was long ago pointed out by Villermé, who, on comparing the death-rate of the richest and poorest quarters in Paris, ascertained that the people of the poor quarters lived a far shorter and more unhealthy life than those in the fine quarters.

Mr. Charles Ansell, jun., one of the actuaries of the National Life Assurance Society, of 2 King William Street, London, has quite recently given a most striking set of data as a contribution to the elucidation of this most important question, in publishing a work on the rate of mortality at early periods of life, the age of marriage, the number of children to a marriage, and the length of a generation, with other statistics of families of the upper and middle classes in England—a work which we are sure will make some important changes in the rate of insurance paid by the easy classes.

In the year 1871 the directors of this society sent round a number of circulars addressed to members of the clerical, medical, and legal professions, and to a large number of other gentlemen in England and Wales. Of 49,099 children of whom full particulars were received by the society, 1,059 had been stillborn—a very important piece of information in itself, since in this country the registration of still-births is most imperfect, and thus, of course, the death-rate too low as compared with countries like France, where all still-births are registered. We may henceforth say that about one in fifty of all children born are still-births.

In the diagrams accompanying the admirable work of Mr. C. Ansell we see that there is a much smaller aggregate mortality from birth upwards than is noticed in other tables, such as those of the Registrar-General, the Carlisle, or other tables. Mr. Ansell well observes that the influences at work in increasing the mortality of poor children are—food, insufficient in quantity and improper in kind, deficiency in warm clothing, want or delay in medical attendance, crowded and unhealthy dwellings, and neglect on the part of parents, illegitimacy, and burial clubs. It is especially in the earliest years of life that the "upper class" tables of Mr. Ansell exhibit the greatest divergence from the "English Life" and "Carlisle" tables.

Thus the mortality of the "Upper Class" tables is to that of the "Carlisle" tables as 52 to 100 under five years; as 26 to 1,000 between one and five; as 61 to 100 between five and fifteen; as 104 to 100 between fifteen and twenty-five; as 91 to 100 between twenty-five and thirty-five; as 73 to 100 between thirty-five and forty-five; as 77 to 100 between forty-five and fifty-five; as 71 to 100 between fifty-five and sixty-five; and as 81 to 100 between sixty-five and seventy-five.

A rapid and continuous decrease in the rate of mortality from birth up to a period of childhood varying from ten to fifteen years of age, in four out of the five tables, but stopping at six years of age, is found in "Peerage Families."

It has been found from Mr. Ansell's inquiries that the parallels of equal mortality among the "upper classes" are as follows:—The mortality at one equals that at sixty-nine; at two, that of fifty-six; at three, that of thirty-six; at four, that of twenty-one; and at five, that of nineteen; at six, that of seventeen; and at seven, of sixteen.

It is not to be wondered at that among the richer classes of England and Wales, at every age, the aggregate mortality from birth up to that age is greater among males than among females. Drinking, smoking, hard work, and accidents, far more than counterbalance the dangers of parturition in the female. With the exception of a short interval at the age of two, the female mortality is less than that of males from birth up to ten; from ten to seventeen the male mortality is less than the female; but at all subsequent ages women live longer than men. Between eighteen and fifty 21·30 per cent. of women die, and 28.17 of men, according to Ansell's inquiries. In the "English Life" tables, women at these ages are not nearly so fortunate, and their mortality is to that of men as 30.85 to 31.10, or nearly equal. The fact is that women among the poor work too hard, and rich women too little. Women have in the better classes a very small mortality at the age of forty-five, contrary to supposition.

In tracing the mortality of the first year of life, Mr. Ansell finds that as much as ten per cent. of the total mortality of the first year of life takes place on the day of birth among males; from birth up to the eighth day there is a rapid diminution in the rate, and this again rises until the fourteenth day, when it rapidly decreases. The mortality of the children of the clergy is lower than that of either lawyers or medical men, on account, doubtless, of being brought up in the country.

Mr. Ansell's tables show how large is the number of still-born eldest children as compared to other children. As usual, he finds 105 boys born to 100 girls. At the age of thirty-four the numbers of the two sexes have become equal among the richer classes enumerated by Mr. Ansell. Beyond this age women are found in greater numbers, so that at eighty there are 813 males to 1,000 females alive. We hear better accounts from France as to the proportions of the sexes carried off by hard work. In that country there are at present about the same figuresfor female population as for male.

In one million births Mr. Ansell finds that among the "upper classes" in England and Wales there are 9,492 twins and 118 triple births, but no quadruplets. From this it appears that once in about one hundred times we may expect a twin birth to occur. It would seem, however, that once twins borne by any woman, she is more likely to have this occurrence again; and it is found that twin children are very much more likely to die than single births.

Among the richer classes of Mr. Ansell's tables the age of marriage between bachelors and spinsters were found to be, before 1840, for bachelors 28.45, and for spinsters 24.51, giving a mean difference of about four years between the ages of husband and wife. Since 1840 the average of marriage seems only to have risen half a year or one year. As regards both sexes there is a period of life which, from the large number of marriages occurring in it, may be termed the "marriage" age—viz., in the case of males, from twenty-five to twenty-eight, and of females from twenty-one to twenty-five.

With regard to the all-important point, the number of children to a marriage, Mr. Ansell's tables show that where both parents survive the child-bearing age of the mother, there are 1,919 marriages of bachelors to spinsters, of whom 152, or eight per cent., had no children. In 131 cases there was only one child. Families of five children seem the most frequent number. It is only one family out of forty-two among the richer classes that more than twelve children are born. The largest families in the tables include those of eighteen, of which there were three cases; but there was an example of a mother who had had twenty-five. In this case the father was twenty-six and mother twenty-one when they married. The children, twelve sons and thirteen daughters, all grew to adult age, but only four were alive. The child-bearing period in this case was twenty-seven years. The mother died at eighty-eight.

The mean number of children where bachelors married spinsters, and the mother had passed the child-bearing age, was 25.8 in Mr. Ansell's tables. The mean age of mothers at the birth of their last child was thirty-eight.

There is one period after marriage at which the births in Mr. Ansell's tables seem to reach the maximum, and this corresponds to the first half of the forty-fourth week of marriage.

There are recorded seven cases where mothers have borne children when over fifty-one, fifty-two, and fifty-three; and the mean age of last child being born was found to be 37.50. Where families were large, however, the reproductive age often extended to forty-four.

The length of a generation among the richer classes, as shown by Mr. Ansell's tables, or the mean period which elapses between the births of parents and the births of their children, is stated by him to be about thirty-four years.

Among the poorer classes in some backward countries the length of a generation does not exceed twenty years. We see then, clearly, the influence of wealth and its consequent happiness in producing longevity and health.

THORACENTESIS.

WE have on several occasions referred to this operation, which seems to be growing in favour, and are induced to return to it by the appearance during the month, in the *British Medical Journal*, of several articles in which it is referred to.

~~In an able communication on Pleuritic Effusion generally~~, Dr. J. R. Wardell, ~~of Tunbridge Wells~~, thus states the conditions which may be regarded as the morbid states, and the positive and negative signs demanding the operation:—

1. In all cases in which inspection and the physical signs give evidence of a large quantity of fluid, when there are symptoms of compression of the lung, and there is manifest cardiac displacement.

2. When there are urgent dyspnœa, an irregular pulse, and threatening of orthopnœa.

3. When the affected side is smooth and rounded, and the intercostal spaces are effaced or protrude; when measurement proves bulging; when the dulness in the chest is complete, or demarcated, and absolute; when there is abolition of tactile fremitus; when there are broncho-phonic voice, tubular breathing, and absence of breath-sound; when the patient can only lie on one side, or in diagonal position; and when there is the Hippocratic sign of succussion.

4. When the exploratory needle proves the fluid to be purulent.

5. If the heart be pushed from its normal situation, and the apex be substernal or beyond the right sternal edge, or if it be thrust towards the left hypochondrium, or if it be lost; when it becomes presumptive that the organ has been driven inwards and backwards; and when on the one side the liver depends abnormally into the abdomen, and when on the other side the relaxed and down-pressed diaphragm so displaces the spleen that its free edge can be *felt*.

6. When half the thoracic cavity is filled, and a month or so shows no proof of absorption, the longer the delay the less are the chances of expansion.

7. In those exceptional cases of double pleurisy when both cavities become half filled with effusion, and dyspnœa shows the lung-space to be dangerously encroached upon.

8. In pulmonary phthisis, when the accumulation of serous or sero-purulent secretion causes distress, and when the other lung assumes the symptoms of bronchitis or pneumonia, the operation should at once be performed.

9. In mechanical hydrothorax it may be had recourse to, though with no objet to cure, but with merely a view for a time to prolong life and to aid the action of medicinal remedies.

10. In children, whose chest walls are thin, and in whom the white tissues are more developed and confer greater resiliency to the thoracic parietes, and whenever there are certain evidences of fluid. it should without delay be evacuated.

11. In hydropneumothorax it may be generally with safety and benefit employed.

12. Pointing externally should never be waited for.

13. Under certain circumstances repeated tappings are required.

Dr. H. F. A. Goodridge, of Bath, relates a case of acute pleuritic effusion, steadily advancing until the twelfth day, on which 45 oz. of fluid were removed, when absorption became active, and recovery was attained by the fortieth day. This case he contrasts with another which was treated without operation; but although the issue of the case was satisfactory, inasmuch as the patient recovered, Dr. Goodridge thinks that the comparative disadvantages of its treatment can hardly be overlooked—viz.:

1. The uncertainty of success, which uncertainty, it is maintained, cannot in anything like equal degree, if at all, be predicated of thoracentesis practised with due precautions, and with the improved instruments; practised, in short, as it now is.

2. The prolongation of the period of danger here represented by the four or five days following the admission of the patient. Sudden death was then a liability, and the youth of the subject would afford no adequate protection against it.

3. The length of time under treatment, and the comparative slowness of convalescence.

Dr. D. M. Williams, of the Liverpool Consumption Hospital, is not so disposed as the previous writers to early operation, thinking that serum will re-accumulate and probably become purulent. He relates a case in which an operation was performed, and the pus evacuated was found to be fœtid, although he believed no fistulous communication existed between the lung and the pleural cavity. After the evacuation of the pus a rapid improvement took place.

Mr. William Date, of Crewkerne, tapped a patient who had all the signs of simple pleuritic effusion, and was somewhat surprised to find that pus made its exit. Although the aspirator was employed, the pus that re-accumulated became offensive. The patient was tapped several times, with great relief on each occasion, but subsequently sank, as so many cases of empyema do. No post-mortem was permitted.

In the *Journal de Médecine et de Chirurgie* for December are reported some observations recently made by M. Peter, of Paris, in his clinique at the Hôpital Saint-Antoine. M. Peter remarked that puncture with the trocar in purulent pleurisy is often followed by the formation of a purulent fistula. It was important not to be misled on this point, and every time a purulent pleurisy is punctured, the patient and his friends should be forewarned. Immediately after the puncture the wound and the wall of the thorax appeared to close easily. At the end of a certain time, however, the little wound opens again, and evacuates a certain quantity of pus; then it closes again, to open later on; and a permanent fistula is gradually formed. Unless the patient has been warned of the probability of this event happening, he will probably accuse the physician of unskilful management, whilst it is really a consequence of the nature of the disease.

THE ACTION OF DRUGS.

THE report of the researches of the Edinburgh Committee, presided over by Prof. Hughes Bennett, has continued to be published in instalments during the month in the *British Medical Journal*, and we continue to give an analysis.

ATROPIA AND MORPHIA.

Professor Bennett calls attention to the following conclusions arrived at by Dr. John Harley :—

"*Conclusions.*—1. In the dog, belladonna, when administered simultaneously with opium, more or less completely prevents nausea and vomiting ; and, when given previously, entirely prevents these effects. 2. Whether given previously, simultaneously, or subsequently, atropia completely counteracts the respiratory restraint on the free action of the heart, which is so prominent an effect of the operation of opium. We can wish for no more perfect an illustration of the beneficial influence of a medicine under suitable conditions than that afforded by the simple and direct action of atropia in relieving the impending syncope which often persists for many hours after a dose of opium. At first, the cardiac systoles are doubled, but a regular expiratory pause remains. During the next sixty or ninety seconds, the systoles become stronger and each one distinctly perceptible to the finger; and at the end of this time the inspiratory intermissions cease, and no trace of their presence remains. The effect is even more marked under the influence of the combined action of morphia and thebaia. 3. While the special effects of opium on the muscles of organic life are thus counteracted by the stimulant action of atropia on the sympathetic, the cerebral and anæsthetic effects are intensified and prolonged by belladonna, and hypnosis is converted into narcosis. 4. On the other hand, all the effects of atropia, excepting perhaps the influence on the heart, are increased and prolonged by opium, and the cerebral effect in particular; the insomnia which results from excessive doses is converted into narcotism, or a mixture of narcotism and delirium. 5. The simultaneous action of opium retards the evacuation of urine, but in no degree interferes with the elimination of atropia by the kidneys."

"*Conclusions.*—1. That the evidence of antagonism in any given case is inconclusive. 2. Taken individually or collectively, the cases show that belladonna has no influence whatever in accelerating the recovery from the poisonous effects of opium. 3. That somnolency, stupor, narcotism, and coma—the essential effects of the action of opium—are both intensified and prolonged by the concurrent action of belladonna. 4. That belladonna is powerless to obviate the chief danger in opium-poisoning —viz., the depression of the respiratory function. 5. That the results of the combined action of opium and belladonna are the same, whether given in medicinal or toxical doses. While, therefore, belladonna cannot in any sense be regarded as an antidote against opium, but in large doses the exact reverse, it may, under certain conditions mentioned below, and always in very small doses, be used in conjunction with other remedies as a means of aiding the recovery. [The 'conditions' to which Dr. Harley alludes are, to give '1-96th of a grain of sulphate of atropia at intervals of two hours, to stimulate the failing power of the heart.'] "

The following are the conclusions arrived at by Mitchell, Keen, and Morehouse :—

"The foregoing experiments and observations authorise us, we think, to draw the following conclusions as to the use of hypodermic injections, and as to the antagonism of atropia and morphia.

"1. Conia, atropia, and daturia, have no power to lessen pain when used subdermally.

"2. Morphia thus used is of the utmost value to relieve pain, and is most potent, in certain forms of neuralgia, the nearer it is applied to the seat of the suffering.

"3. Morphia lowers the pulse slightly, or not at all. Atropia usually lowers the pulse a few beats within ten minutes, and then raises it twenty to fifty beats within an hour. The pulse finally falls about the tenth hour below the normal number, and regains its healthy rate within twenty-four hours.

"4. Morphia has no power to prevent atropia from thus influencing the pulse ; so that, as regards the circulation, they do not counteract one another.

"5. During the change of the pulse under atropia, the number of respirations is hardly altered at all.

"6. As regards the eye, the two agents in question are mutually antagonistic ; but atropia continues to act for a much longer time than morphia.

"7. The cerebral symptoms caused by either drug are to a great extent capable of being overcome by the other; but, owing to the different rates at which they move to affect the system, it is not easy to obtain a perfect balance of effects ; and this was made the more difficult from the fact already mentioned, that atropia has the greater duration of toxic activity.

"8. The dry mouth of atropia is not made less by the coincident or precedent use of morphia. Atropia does not constipate, and may even relax, the bowels ; morphia has a reverse tendency.

"9. The nausea of morphia is not antagonised or prevented by atropia.

"10. Both agents cause dysuria in certain cases, nor is the dysuria occasioned by the one agent relieved by the other.

"11. Atropia has no ability to alter or lessen the energy with which morphia acts to diminish sensibility or relieve the pain of neuralgic disease.

"12. As regards toxic effects on the cerebral organs, the two agents are mutually antidotal ; but this antagonism does not prevail throughout the whole range of their influence, so that, in some respects, they do not counteract one another ; whilst, as regards one organ—the bladder—both seem to affect it in a similar way."

To test these conclusions the Committee made various experiments with sulphate of atropia and meconate of morphia on dogs, first ascertaining that the normal respirations of a dog per minute are about 30, and the cardiac pulsations about 120. They then proceeded to inject into a Scotch terrier weighing 12 lbs. two grains of meconate of morphia, dissolved in twenty-eight minims of water, with the following results: depression of the cardiac impulses, from 120 to 72 per minute, and of the respiratory movements, from 30 to 14 per minute. Then, forty minutes after the commencement of the experiment, the cardiac pulsations became so feeble that they could not be counted with accuracy. The respiratory movements were deep and prolonged. The animal was deeply narcotised. Reflex movements were made on touching the eyelashes or the conjunctiva, but there were none on pinching the legs or tail. Fæces were passed involuntarily. There was very little moisture about the mouth. There were slight jerks occasionally of the muscles of the back. The dog continued in this state for four hours, when it began slowly to recover. It recovered entirely. For twenty-four hours it appeared to be feeble in its hinder limbs. Three days afterwards it was quite lively. The dose was nearly, but not quite, a fatal one. Nobody seeing the dog three hours after it had received the two grains of meconate of morphia would have believed in its recovery.

In the next experiment two and a half grains of meconate of morphia and 1-12th of a grain of sulphate of atropia were injected simultaneously, the respiration and cardiac pulsations being found to average—respirations 28 per minute, cardiac pulsations 132 per minute, while the pupil measured 7-50ths of an inch at the commencement; but after sixty minutes it was found (1) that the respirations had fallen from 28 to 16, and were deeper and more prolonged; (2) the cardiac pulsations had risen from 140 to 231, and were for a time very powerful, but afterwards became so weak as scarcely to be felt; and (3) the pupil became contracted, but not nearly to the same extent as would have been produced by the meconate of morphia alone.

Professor Bennett thus sums up:—

"These results indicate a mutual action between the meconate of morphia and the sulphate of atropia. Meconate of morphia, when given alone, depresses both the cardiac pulsations and the respirations, and contracts the pupil. Sulphate of atropia, when given alone, slightly depresses the respirations, greatly accelerates the cardiac pulsations, and dilates the pupil. When both are given together, as in this experiment (Table xxxiii.), the respirations were reduced in frequency, indicating a preponderance in the effect of meconate of morphia; the cardiac pulsations were increased, indicating a stimulant action on the heart produced by the sulphate of atropia; and the pupil was slightly contracted, indicating that, with respect to this structure, there was nearly a balance as regards physiological effect between the two substances, but the influence was in favour of the meconate of morphia. It is also to be observed that the acceleration of the cardiac pulsations was not nearly so great when both substances were exhibited, as when sulphate of atropia, *even in smaller doses*, (italics ours), was given alone (see remarks on the physiological action of sulphate of atropia on dogs, *Journal*, October 24th, page 519).

"The dog in this experiment died at the end of three hours and a half. It gradually became more and more deeply comatose. There was no evidence of any delirium. Reflex action gradually became more and more feeble; the respiratory movements were fewer and more and more shallow; the cardiac pulsations became so weak as scarcely to be felt, but they were still rapid, and at last the animal died without any convulsive seizure. The lungs were much congested, and there was fluid in the pleura."

Other experiments confirmed the above, and the report thus concludes:—

"It appears from the above experiments, that in dogs sulphate of atropia modifies the symptoms of poisoning by meconate of morphia, diminishes their intensity, and may even save life after a fatal dose of the latter. It is therefore decidedly antagonistic, but within a limited area. In man, sulphate of atropia would be too dangerous and uncertain a remedy to depend on in cases of poisoning by opium or any of its salts, but where the heart's action is greatly diminished it is directly indicated."

We cannot help remarking that we should not dare on the strength of these experiments to trust to atropia as an antidote in opium-poisoning, and we fancy its only good would be *in small doses* to stimulate the heart. In large doses it would add to the narcotism.

MORPHIA AND THEINE, CAFFEINE, ETC.

Professor Hughes Bennett next inquired into the antagonism between tea, coffee, cocaine, theine, caffeine, and guaranine, on the one hand, and morphia on the other, and this investigation was divided into three parts: 1. An inquiry into the physiological properties of cocaine, the active principle of the plant known as *Erythroxylon coca*, of theine, of caffeine, and of guaranine; 2. An inquiry to ascertain whether or not the active principles theine, caffeine, and guaranine, act as antagonists to fatal doses of morphia or opium; and 3. An inquiry to ascertain whether or not strong infusion of tea or decoction of coffee, when introduced into the stomach, act as antagonists to fatal doses of morphia or opium.

The general results from thirty experiments on frogs, mice, and rabbits, as to the physiological action of cocaine, were as follows:—

1. The physiological actions of erythroxylon coca are due to its proximate principle, cocaine.
2. Cocaine is a powerful poison, inducing a series of symptoms affecting the nervous, respiratory, circulatory, and vaso-motor systems, which terminate, if the dose be large enough, in death.
3. Cocaine, in small doses not ending fatally, produces—1, cerebral excitement, not succeeded by coma; and 2, partial loss of sensibility.
4. In large doses, cocaine produces—1, cerebral excitement; 2, complete paralysis of sensibility; 3, tetanic spasms and convulsions; and 4, death.
5. Cocaine paralyses the entire posterior columns of the spinal cord, also the entire system of peripheral sensory nerves; but the anterior columns of the cord and the peripheral motor nerves are not paralysed.
6. Cocaine frequently produces convulsions of a clonic character; but occasionally it causes tetanic spasms, which latter are sometimes so severe as to produce opisthotonos. There is, at first sight, a resemblance between these spasms and those following the administration of strychnine; but, in the case of strychnine, the action of the poison is limited to the spinal cord, the reflex function of which is so much excited that the slightest touch from without causes powerful spasms. A poisonous dose of cocaine, on the other hand, paralyses the sensory nerves, so that external irritations do not affect the cord; but, notwithstanding, there are strong spontaneous spasms, which are probably caused by the reflex action of the drug on the cord itself, and which spasms are not to be considered as reflex in their nature.
7. Cocaine does not produce muscular paralysis.
8. Cocaine at first increases, then impedes, and lastly stops, respiration.
9. Cocaine at first increases, and finally diminishes, both the force and frequency of the heart's contractions.
10. Cocaine produces at first contraction, afterwards dilatation or paralysis, of the capillaries and small blood-vessels, with stasis of the blood, indicating first irritation and subsequent paralysis of the vaso-motor nerves. This action of cocaine upon the capillary blood-vessels, now described for the first time, is of great interest, as it simulates the action of the drug in this respect to that of nitrite of amyl described by Dr. Richardson.

The experiments contained in Table 35 show a very small quantity of cocaine is sufficient to kill a mouse as compared with a frog, for 1-32nd of a grain proved fatal to a mouse, while a frog recovered from 1-16th of a grain (Experiments 384, 386, 387), but succumbed to 1-12th (Experiment 388); but there would seem to be difference in tolerance of drugs amongst frogs as well as men, for the frogs used in the Experiments 395-396 died after 1-32nd of a grain; but why, we are not told.

The rabbit used in Experiment 394 took in all 12 grains in divided doses, but recovered, although the physiological effects were pretty well marked, for, from first dose there was congestion of ears; from second dose, slight cerebral excitement; from third dose, great irritability, no loss of sensibility; from fourth dose, congestion of ears increased; from fifth dose, depression, staggering gait. Numbers of respirations and pulsations of the heart—1st increased, and 2nd diminished. Temperature: 1st diminished, and 2nd increased.

The Committee next investigated the physiological properties of extract of coca, and found that a mouse succumbed to 2 grains; a frog recovered from 2½ grains, but was killed by 3 grains; while a rabbit took 12 grains without any apparent effect. In Tables 37 to 49 the effect of cocaine, caffeine, and theine on the respiration, cardiac pulsations, and temperature are recorded, and we find that they bear out the conclusions we have already quoted; but there is one point not included in those conclusions to which we wish to draw attention—viz., the effect produced upon the temperature by these drugs. In Table 43, after the injection of theine, the temperature in a rabbit rose from 33.2 C. to 35.5 C., and gradually fell to 33.9 C. (the normal temperature is stated to be 33.8 C.), and in Experiment 394 we are told the temperature is first diminished and then increased after the injection of cocaine. In Table 46 we see that, after the injection of caffeine, the temperature rose to 36.6 C.; and (Table 49) after the injection of guaranine the temperature rose to 35 C. It is thus evident that theine, caffeine, and guaranine tend to raise the temperature above the normal, and it is stated that cocaine first diminishes but then raises the temperature; theine and guaranine seem also at first to reduce the temperature.

Commenting on these facts, the *Medical Press* says:—

"The question we naturally ask is, Is this a property peculiar to these drugs, or is it a property common to most drugs when introduced into the healthy system? for we find it stated in Messrs. Burness and Mavor's (a) work that they experimented with various drugs, and observed that in the horse tincture of datura tatula raised the temperature from 99 4-5ths F. to 100 3-5ths F.; acetate of morphia in 4 grain doses raised the temperature from 99 4-5ths F. to 100 3-5ths F., and then it fell to 100 2-5ths F., and remained thus for 24 hours. One-quarter of a grain of atropia raised the temperature from 99 3-5ths F. to 100 4-5ths F., and did not fall to 99 3-5ths F. till the third day; one drachm of opium followed by a quarter of a grain of atropia raised the temperature to 105° F.; whilst one drachm of bichromate of potash raised the temperature from 100 1-5th F. to 106 1-5th F. in 4 hours. These experimenters conclude, that various non-nutritious agents introduced into the system in health, by producing deranged function, tend to raise temperature; they, however, state there are certain drugs which lower temperature, such as chloral, &c."

From their experiments with theine, caffeine, and guaranine, the Committee conclude that their physiological effects are identical with cocaine. They, however, conducted a series of experiments with theine on frogs, rabbits, and cats, which are also fully reported, and to which we direct our readers' attention, only quoting the concluding remarks of the report, which are as follows:—

From these experiments, and those in the Tables 50, 51, and 52, the general conclusion may be drawn, that, as cocaine, theine, caffeine, and guaranine chemically resemble one another, so do their physiological actions seem precisely similar.

Numerous observations made on larger animals (cats and rabbits) with the three last substances demonstrated the following facts, in addition to those already determined with cocaine:—

1. These three alkaloids—theine, caffeine, and guaranine—produce an increase of the salivary secretion.
2. They produce a peculiar form of tenesmus, accompanied by a copious discharge of clear mucus from the bowels.
3. They usually produce contraction of the pupil.
4. They affect the temperature by (1) slightly lowering and (2) increasing it.

Although we have not been able to demonstrate that these four properties also belong to cocaine, we have every reason to believe, judging from their other analogies, that if similar doses of it were given the same results would ensue.

ABOUT BOOKS.

The Pathological Anatomy of the Nervous Centres. By Edward Long Fox, M.D., F.R.C.P. London: Smith, Elder and Co.

We may preface the following remarks by stating that Dr. Fox's work is one of the most valuable contributions to the study of nervous diseases that of late years has issued from the press. In his work are the carefully collected observations obtained from an hospital practice of 17 years in a large city (Bristol). We are glad to note that Dr. Fox thinks the word *functional* a misnomer, and we agree with him that there is no organ in the body which has been considered to be more frequently the seat of functional disease than the brain, and that many nervous complaints are associated with no *organic* change. These views our author fully discusses, and states that "phenomena are not functional because there is no lesion, but because the lesion is transitory and evanescent." Under this head variation in the calibre of blood-vessels may be classed which is so often only of temporary duration. Another point our author insists on, and that correctly, is that "not only are rigor, tremor, spasm, convulsion, mere varieties of the same condition, but these are closely allied to incoordination, and through this to paralysis."

The work embraces many points of great interest, such as—Lecture I. Abnormalities of the Vascular System; IV. Degenerations; IX. Aphasia; XIV. Ophthalmoscopy in Diseases of the Nervous System. In the first lecture, devoted to congenital abnormalities, we are informed that spina bifida "is specially prevalent" in Holland, and that this affection is chiefly found in those countries more or less circumscribed where intermarriage of relations is prevalent. The observations relating to the pathology of tetanus are valuable, as regards not only the author's own views, but those of Lockhart Clark, Dickenson, Allbutt, and others; whilst at page 356 there is a capital illustration of the colloid and amyloid degeneration and thickened vessels of the spinal cord; indeed, all the illustrations—nineteen in number—are excellent. It is with regret that we are obliged to conclude our brief remarks (as space is not at our disposal to enter more fully) of a work that should be in the hands of every physician.

The Protoplasmic Theory of Life. By John Drysdale, M.D. London: Baillière, Tindall, and Cox.

Within the last ten years numerous are the works, good, bad, and indifferent, that have been published on similar subjects to the above. In his preface, Dr. Drysdale states that the subject of the present volume was the theme of an inaugural address to the Microscopical Society of Liverpool, 1874; his attention had, however, been directed for several years to the same subject, seeing that Dr. D. was one of the editors of Fletcher's works on physiology. "Every action," the author says, "properly called vital, throughout the vegetable and animal kingdoms, results solely from the changes occurring in a structureless, semi-fluid, nitrogenous matter, now called protoplasm." The book is instructive, well written, and we cordially recommend it to our readers, as giving not only the author's own views, but also the opinions of other eminent men, such as Beale, Goodsir, Huxley, &c.

(a) "Specific Action of Drugs," p. 28.

Rational Medicine. Introductory Lecture delivered at King's College, Oct. 1st, 1874. By David Ferrier, M.A., M.D. London: Smith, Elder, and Co. 1874.

We have received Professor Ferrier's Introductory Lecture, delivered at King's College, London, on the occasion of the opening of the present session. The lecturer treated of rational medicine as founded upon physiology. As might be expected from so able a physiologist, the importance of the study of physiology as the basis of medicine was eloquently advocated. The following extract shows the lecturer's large views on the vexed question of medical education:—

> "When you consider that the medical curriculum embraces almost the whole circle of the sciences, each of which, or even a single department of which, is sufficient for the study of a lifetime, and that all these subjects have to be gone through within three or four short years, and that you are expected to know something of them all, the prospect is somewhat alarming. Not merely have you to become acquainted with the characters and forms of disease, and the methods of recognising and treating it, but as a preliminary step you have to study the sciences of chemistry, botany, and natural history, and anatomy and physiology. The impossibility of acquiring more than a very superficial knowledge of chemistry, botany, and natural history in the short time allotted to medical study, in which it is of the first importance that you should gain that amount, at least, of practical information which shall constitute you safe, if not reliable, practitioners of surgery and medicine, has led to grave doubts in the minds of those whose opinion on medical education is of the greatest weight, as to the advisability of continuing these accessory sciences as an essential part of the medical curriculum. For, as regards the ultimate end of all your training—viz., the treatment of disease,—it can hardly be considered essential that a practitioner should be able to give the natural order or botanical characters of the rhubarb which he prescribes, or the class, order, and biological characters of the leech which he orders to be applied to a painful spot, any more than that the surgeon should be able to give a complete account of the metallurgy of iron, and the various processes in the manufacture of the scalpel which he uses. And no less an authority than Professor Huxley, whose life is devoted to science, would rather prefer as a medical attendant one who is entirely ignorant of botany or zoology, on the ground that one may be as good a practitioner, and in all probability better, if he has devoted all his time to the practical rather than occupied himself with the scientific branches of the profession.
>
> "But though much may be said in favour of this view of medical education, and of the desirability of concentrating the chief energies of the student on the study of those subjects, the directly practical bearing and monetary value of which can be readily appreciated by all, there is great danger lest these views should carry us to the opposite extreme, and lead us to consider that the chief and highest aim of medical education is to develope a race of purely 'practical men,' to the entire exclusion of that breadth of scientific and general culture which it has always been the boast of our profession to possess, and to which, as much as to its mere handicraft skill, it owes its high position and recent progress. It is no doubt true that it would be well if our students could all begin their purely professional studies already well grounded in those accessory sciences of which we have spoken; but I am inclined to think that the disproportion between the proficiency achieved and the time devoted to them has been greatly overestimated. If only that knowledge of chemistry, botany, and zoology is of value which is thorough and complete, then the time which a medical student can devote to them is ridiculously insufficient to enable him to reach this standard. But a knowledge of these subjects infinitely short of such a standard is, in my opinion, of the utmost value. A medical practitioner need not be a thorough botanist, an expert chemist, or an accomplished zoologist; yet the time devoted to the study of sciences of accurate observation and careful induction will have a most beneficial influence in fostering similar habits of thought in the field of every-day practice,—and nowhere are they more needed."

The Art and Science of Medicine. Introductory Address at St. George's Hospital. By W. Howship Dickinson, Physician to the Hospital. London: Longmans, Green and Co. 1874.

This thoughtful address shows how the progress of medicine has depended directly or indirectly on science extraneous to itself; but it also suggests that chemical and physical science may mislead, instead of guiding aright. Besides, we must be awake to the teaching of unexplained experience, and reject no truth because it is empirical, though we may look more narrowly at the evidence on which it rests. Dr. D. calls scientific thought the motive power, and experience the controlling influence, and concludes as follows:—

> "Let us be no mere distributors of salves and potions, for everything its remedy, and half the remedies delusions; but while we practise the art of medicine, let us study the science of disease; and accept promise of unbroken progress and increasing utility, in association with that knowledge of universal nature, ever widening and deeping in all her modes and results, which is the glory of the age and the hope of the future."

This is one of the most elegantly got-up works we have seen for a long time, and we congratulate the publishers on the taste they have shown.

The Philosophy of Voice, showing the Right and Wrong Action of Voice in Speech and Song. By Charles Lunn. London: Baillière, Tindall, and Cox.

This is a critical essay on the differences between the statements of musicians and physiologists, reprinted from the *Medical Press and Circular.* The author exposes some popular fallacies with great force, and considers voice-culture a branch of the medical rather than the musical art. He even goes so far as to propose establishing at each university a professorship of voice production. The essay will be found very interesting to the medical profession, to the members of which it is dedicated, while every teacher of singing should carefully study it. If Mr. Lunn be right, some of the most popular teachers are wrong, and his arguments are sufficiently weighty to call forth their careful consideration. We have always looked upon the cultivation of the singing and speaking voice as largely comprised within the medical art, and we should be glad for the profession generally to pay more attention to it. We have therefore much pleasure in introducing Mr. Lunn's able essay to our readers.

Clinical Pocket-Book: an Aid to the Study of Clinical Medicine. For the Use of Students of the Manchester Royal Infirmary. London: Smith, Elder, and Co. 1874.

We should be glad to see this useful Clinical Pocket-Book in the hands of students of other schools besides that for which it was originally written. It is an excellent companion in the medical wards, and may be divided into two parts. The first, which has pleased us most, is devoted to the clinical topography of the body. It is illustrated by four diagrammatic plates, showing the position of the several regions of the body, and the viscera beneath. In the text the several regions are very accurately defined. The second part gives directions for the methodical examination of patients.

The Visiting List for 1875. London : John Smith and Company.

OUR old friend "The Visiting List," which from so many years' use we have come to regard as a necessity in our daily practice, has again appeared to remind us of another year of labour, to the lightening of which it has done much in the past, and will doubtless serve a similar purpose during 1875. To those of our readers who have been accustomed to it, we need not add a word of recommendation, and to such as have not, we would say, try it.

The Pharmacopœial Companion to the Visiting List. By ROBERT T. H. BARTLEY, M.D., M.B. London : Baillière, Tindall, and Cox.

IN commending to the use of our readers this little twelve-page companion, we do not wish to infer that the "Visiting List" is deficient in its proper sphere ; rather would we style Dr. Bartley's work an addendum thereto, a valuable aid to the busy practitioner, when, in the hurry of the moment the particular dose or action of a drug may have escaped his memory. That Dr. Bartley's idea is appreciated by the profession is shown by the fact that a second edition has been issued within three weeks. We have both the first and second before us, and should feel indeed surprised if we met a friend in practice who had not spent sixpence in such a handy little companion—verily *multum in parvo.*

JOTTINGS FROM JOURNALS.

EPITHELIOMA.

The destructive results from, and intractable character of, epithelioma, render any treatment that yields a prospect of success of the utmost practical importance. In a case of epithelioma of the lower lip, reported in different French journals, M. Amussat had recourse to the electric cautery. A Bunsen's battery of sixteen small elements was charged with bichromate of potash and sulphuric acid, diluted with ten parts of water. The cautery was applied to the ulceration directly, while the carbon electrode of the negative pole rested on the right deltoid muscle. The process, which lasted about twenty minutes, was occasionally interrupted in order to ease the sufferer. On removing the cautery the ulceration, which implicated the lip in its whole thickness, proved to be thoroughly disorganised. In about a month the ulceration was found replaced by a small linear cicatrix, and the patient was pronounced cured.

ASTHMA.

The suffering experienced by those who labour under asthma is painful even to witness. What must it be, then, to experience ? In a most severe attack of acute asthma in a native woman, Sub-Assistant-Surgeon Noevor Chunder Banerjee, following up a suggestion of Surgeon-Major Baillie, Bhaugulpore, injected three grains of chloral, dissolved in twenty minims of water, into the subcutaneous tissue at the back of the neck. In ten minutes after, the asthmatic spasm had wholly ceased. Easy natural respiration took its place, and the sufferer expressed herself as entirely relieved. The subcutaneous injection of chloral has been resorted to with success in cases of traumatic tetanus at Bordeaux ; and Dr. MacCormac, of Belfast, has recently urged its employment as an anæsthetic in hydrophobia—a malady which hitherto has proved rebellious to every mode of treatment. Surgeon Baillie himself has proposed to have recourse to it on the very first opportunity.—*Indian Medical Gazette.*

EUCALYPTUS GLOBULUS.

So many British colonies border upon, or are included in, malarious districts, that the more general introduction of this plant ought to be enforced by the authorities. M. Gimbert cites in the *Comptes Rendus* quite a number of instances as occurring in Algiers wherein a pestilential atmosphere, notorious for the production of malarious fever, was very greatly amended by the introduction of the eucalyptus. Its efficacy has been further proved in the marshy districts of the Punjab. If the eucalyptus should be found to bear the climate of the West African Coast and British Guiana, its introduction into those regions would prove an act of the greatest humanity.

PLEURITIC EFFUSION.

The writer of these remarks saw a case in which a *practical* man, as he affected to consider himself, was treating pleuritic effusion as if it had been an instance of tubercular phthisis. By means of baths, a good regimen, repeated blistering, and the inward exhibition of the iodide of potassium, the patient made a good recovery. In cases, however, where the effusion is such as to render paracentesis essential, Dr. Bucquoy, of the Hôpital Cochin, has had recourse with success to capillary puncture and the introduction of the aspirator.—"Leçons Recueillies," par M. Hanot, (a) interne du service.—*La Tribune Médicale.*

BOLDO.

The *Boldea fragrans*, in the form of wine, or as an elixir of boldea, has, it is claimed, a real efficacy in atony of the liver and digestive derangements generally.

VIPER-BITE.

The death of one of the keepers at the Zoological Gardens from viper-bite, together with many fatalities on the Continent, both in men and in the inferior animals, shows the risk which attends the presence of this unpleasant reptile. In two instances of viper-bite—in the cases of two young shepherds, recorded by Dr. Feuvrier as occurring in Montenegro, and brought before the French Academy of Medicine by Baron Larrey—the sufferers had a narrow escape with life. In one of the cases, seven drops of ammonia in twenty drops of distilled water were injected into the radial vein of the left arm. This, along with diffusible stimuli generally, and a ligature above the bite, constituted the treatment.—*L'Abeille Médicale.*

CERUMEN OF THE EAR.

Some important remarks have been recently made by M. Petrequin on the subject of the cerumen, or wax of the ear, its liability under certain circumstances to accumulate, with the evil after-effects, which this accumulation has on the tympanum and the function of hearing itself. The writer of these remarks has witnessed cases in persons advanced in years in which the accumulation of cerumen was such as actually to stand flush with the level of the exterior meatus. Of course, in such cases it will be needful to remove the accumulation. M. Petrequin prefers injections of tepid water, long persevered in—in fact, a veritable douche. He prefers the Eguisier irrigator, which, being once arranged, operates without further trouble.—*La Presse Médicale.*

INCONTINENCE OF URINE.

By rubbing the perinæum three times daily with an ointment composed of ten grains of sulphate of atropia, plus ten grains of veratria, in twelve drachms of hog's lard, Dr. Kennard, of New York, removed this malady at the end of a few days.—*The Clinic.*

NEURALGIA.

M. Dupuis speaks in warm terms of the good effects of the repeated local application, from half a minute to five minutes at a time, of pledgets of lint moistened with chloroform.—*L'Union Médicale.*

HYDROPHOBIA.

One can never almost be quite sure about hydrophobia. In cases of inoculation performed at Alfort, the dogs became hydrophobic after six weeks. But now M. Féréol brings forward a case before the Académie de Médecine in which a man had incurred hydrophobia two years and a half after receiving the bite from a rabid bitch. The bitch herself had died hydrophobic, and a puppy which she was suckling also perished hydrophobic three weeks after.—*Le Courier Médical.*

(a) Paris, Ad. Delahaye, 1874.

HYDROCELE.

Infantile hydrocele is not very uncommon, and it is well worth knowing that it usually disappears spontaneously. M. Marjolin, in a communication read before the Société de Chirurgie, dwells strongly on this point, and has further fortified his conclusion by the parallel experience of MM. Dupuytren, Janson, and Blandin.—*Id.*

COMBUSTIBLE GAS IN THE STOMACH.

Dr. Anton Ewald describes a case where vomiting of much acid fluid occurred on alternate days, with the expulsion, *per ore et ano*, of great quantities of combustible gas, which burned with a yellow flame when lighted. The inflammable nature of the gas was first discovered by the patient, who, when lighting a cigar, found to his surprise that his eructations took fire. Chemical analysis showed the gaseous eructations to consist of a mixture of carbonic acid, hydrogen, oxygen, nitrogen, marsh gas, and a little olefiant gas. On examining the contents of the stomach it was found that lactic acid and butyric acid fermentation had been going on in the stomach at the same time as alcoholic fermentation.—*The Practitioner.*

AT THE SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

December 8th, 1874.

ON THE LARYNGEAL SYMPTOMS WHICH RESULT FROM THE PRESSURE OF ANEURISMAL AND OTHER TUMOURS ON THE VAGUS AND RECURRENT NERVES.

By George Johnson, M.D., F.R.S.

The object of the paper was to show that bilateral spasm and bilateral palsy of the larynx may result from the pressure of an aneurism or tumour on the vagus nerve of one side only. Reference was made to two cases of aneurism, in both of which bilateral palsy of the larynx was found to exist by laryngoscopic examination during life. In both the P.M. was made with the expectation of finding that the recurrent nerve on both sides was injured, but in both, it was found that the vagus and recurrent on one side only had been compressed by an aneurism, and in both the laryngeal muscles on both sides had undergone atrophic changes. In both cases, the aneurism had compressed not only the recurrent nerve, but also the trunk of the vagus, and it was believed that, while the laryngeal muscles on one side were paralysed by direct pressure on the recurrent, the paralysis on the opposite side was the result of a centripetal irritation of the vagus acting on the nervous centre, and through it on the nerve supply to the laryngeal muscles on the other side. The palsy on one side was direct; on the other reflex. The muscles of the larynx are in a pre-eminent degree bilateral in their action. This bilateral action, according to Dr. Broadbent's hypothesis, is associated with a close connection between the nerve nuclei of the two sides; and Dr. Lockhart Clarke has demonstrated three sets of decussating fibres connecting the nerve nuclei of the spinal accessory nerves. The motor fibres of the laryngeal branches of the vagus being derived from the spinal accessory, the intimate union of their nuclei of origin explains the bilateral action of the laryngeal muscles. The commissural union of the nerve-nuclei of bilaterally acting muscles explains certain pathological facts. 1. These muscles are not paralysed in cases of hemiplegia from lesion of one hemisphere of the brain. 2. In cases of unilateral spasm (hemispasm), the bilaterally acting muscles are implicated in the spasm; the normal motor force in the first cases, the abnormal in the second, passes from the commissural centre to the nerves and muscles on both sides. 3. If the nerve-nuclei and their connecting fibres become diseased, bilateral palsy will result. Pressure on one recurrent nerve, which is an efferent motor nerve, will cause direct unilateral palsy of the larynx, but cannot cause either bilateral spasm or bilateral palsy. Pressure on the trunk of the vagus involving its efferent fibres may cause both bilateral spasm and bilateral palsy of the larynx. Reference was made to some experiments performed by Dr. Rutherford on rabbits, in which the glottis was exposed from below, the superior laryngeal nerve divided, and its central end faradised. This caused strong bilateral spasm of the glottis. An impression conveyed by the incident nerve to the centre was reflected through the efferent nerves to the muscles on both sides. This illustrated the mechanism of bilateral spasm from unilateral irritation. The principle was the same, whether the morbid motor influence pass downwards from one hemisphere of the brain or upwards from one afferent nerve to the common centre of the two pneumogastric trunks. When the recurrent nerve was divided and its lower end faradised, or when the lower end of the divided vagus was galvanised, the result was unilateral abduction of the vocal cord in consequence of the stimulus acting on the efferent fibres of the recurrent. The results of these experiments were essentially the same as those which had been obtained by others, in particular by Rosenthal, and by Waller and Prevost. Long continued irritation of the trunk of the vagus by pressure from an aneurism cannot be imitated by any artificial means; but these experiments support the theory that continuous irritation of the trunk of one vagus may through its afferent fibres so disturb the common centre of the two vagi as to cause either bilateral spasm or bilateral palsy of the larynx. Reference was made to facts illustrating the influence of a peripheral irritation in exciting through a reflex nervous influence pathological changes in distant parts. The more intimate the nervous connection between two parts, the greater is the probability that disease in one may affect the other. It is, then, likely that irritation of the trunk of one vagus will gradually excite functional disturbance and even structural change in the nervous centre, and in the associated nerve on the opposite side. Pressure on one recurrent nerve would never cause serious dyspnœa, but pressure on the trunk of one vagus, by exciting either bilateral spasm or bilateral palsy of the larynx, is a frequent cause. The dyspnœa, which is the result of laryngeol spasm, occurs in paroxysms; it comes and goes with equal suddenness, while the stridor and dyspnœa, which result from laryngeal palsy, come on more gradually, and are more persistent. The laryngoscope is essential for exactly diagnosing these cases. Reference was made to the case of a young man who died in a paroxysm of laryngeal obstruction from what was supposed to be acute laryngitis. The case occurred before the laryngoscope had been invented. After death, the larynx was found healthy, but a cancerous tumour in the chest had implicated the left vagus and recurrent nerve. In another case, hoarseness, cough, and stridor were at first supposed to depend on laryngitis, but the laryngoscope showed a healthy larynx. An aneurism was suspected, and soon caused death by hæmorrhage into the œsophagus. The aneurism (of the aorta) had compressed the left vagus and recurrent. With reference to tracheotomy, the main point is to distinguish between laryngeal palsy or spasm, the result of pressure on the vagus, and narrowing of the trachea by the direct pressure of an aneurism. In the first class of cases, tracheotomy may afford great temporary relief, while in the second the operation would be worse than useless. It was found that when a rabbit was under chloroform, no laryngeal spasm was excited even by faradising the central end of the superior laryngeal nerve. This result is analagous to the influence of chloral hydrate in preventing or lessening laryngeal spasm. In the experiments upon rabbits, it was found that, after division of the superior and inferior laryngeal nerves on both sides, the animal closed the glottis during deglutition. Dr. Rutherford suggested that this closure of the glottis might be effected by constrictors of the pharynx; and, after dividing the constrictors on one side, so as to suspend their action, the glottis remained quite motionless. It appears that during deglutition the pharyngeal constrictors can press together the arytenoid cartilages, and thus close the glottis. This experiment confirms Longet's observations made in the year 1841.

An interesting discussion ollowed, in which Drs. Douglas Powell, Sibson, Broadbent, James Pollock, Symes Thompson, C. J. B. Williams, President, and Mr. Norton took place.

MEDICAL SOCIETY OF LONDON.

Monday, Dec. 7th, 1874.

Dr. Sansom, Vice-President, in the Chair.

Mr. Wm. Allingham exhibited

A SCIRRHOUS TUMOUR OF THE BREAST REMOVED FROM A WOMAN, ÆT. 64, BY THE ELASTIC LIGATURE.

Needles had been introduced in the ligature applied, without pain and without anæsthetics. The process took seventeen days, was unaccompanied by any rise of temperature or other unfavourable symptom, and the patient made a complete recovery.

Mr. Napier inquired what kind of india-rubber was used.

Mr. Thomas Bryant condemed the use of the ligature in ordinary surgical practice, though in exceptional cases, as when the patient was hæmorrhagic, he did not object to it. The operation was tedious, lasting in this case seventeen days, when removal by the knife would have taken seventeen seconds; besides, it had the disadvantage of retaining a mass of almost putrid matter in close connection with the body, giving rise to the danger of septicæmia. It was true the patients did not complain of severe pain, but they underwent a considerable amount of chronic suffering.

Mr. Carter asked why ether was not used. He was under the impression that its use was unattended with risk, and that no deaths had occurred from this cause.

Dr. Theodore Williams was surprised at Mr. Carter's question. A reference to the Report of the Committee of the Medico-Chirurgical Society on Chloroform and Anæsthetics would show him that there had been several deaths from ether, and during the experiments on animals several dogs were killed by ether, as by chloroform, it being only a matter of dose to effect this result.

Dr. Sansom said deaths from ether had been recorded by Trousseau and other authorities.

Mr. Allingham, in reply, said that the patient, being of a very delicate constitution, was unfitted for operation by the knife, while india-rubber was used, and the wound being freely dressed with carbolised oil and other antiseptics, no putridity existed. He knew a medical man who had been operated on by both methods—knife and ligature—and he greatly preferred the latter as being without pain.

Dr. Routh then read a paper on

AN EPIDEMIC OF INFECTIOUS SORE-THROAT

which occurred in a public institution, and the probable causes of its production. After a proper tribute to Dr. Farquharson, who had preceded him last session on a subject analogous to the present, the author first gave a description of the institution and its sanitary appliances, where every means had been taken to secure ventilation and a good supply of water and food, and also the unexceptional cleanliness of the girls who were the inmates. Effective means were likewise always at hand in case of infectious disorders arising, and great care taken to prevent as far as possible their introduction. One case of typhoid fever occurred in October, 1873. The patient was removed to Middlesex Hospital, and ultimately died there. This was after the return of the inmates from the sea-side. On the introduction of a new matron, a little while after, the sore-throat disease broke out synchronously with measles and erysipelas. The appearance of measles was explained by the inmates occupying seats in an ill-ventilated church, where a school, then seriously affected with this epidemic, had been sitting in the morning. One of the erysipelas cases was subject to the disease; but all the others occurred when the throat epidemic was at its height. One died suddenly, with symptoms of sickness and exhaustion. The sore-throat epidemic (of which there were 46 cases) exhibited three types—simple cynanche, diphtheritic patches, and scarlet fever. When Dr. Routh left London, in September, all the sanitary appliances were reported, on inspection, to be in good order. The scarlet fever cases occurred when in the charge of Mr. Cheyne. Then, on inspection again being made, the water was found impure, and the filter, having been meddled with, was no longer effective; the drains in the garden were said to be offensive. One fact was noted—of the six matrons, it was the one who drank water only who was affected with severe cynanche. Of the six monitors, all escaped except one, and she also was a water-drinker. Dr. Routh then proceeded to show that other sources of infection had not been disregarded—(1) from visitors; (2) from infection at the sea-side. But, on full inquiry being made, no such infection was traced. He concluded in urging for discussion—(1) Were the three diseases of the throat coexistent, but different affections, or the same disease? (2) Was the erysipelas produced by a similar miasm? (3) Can the sewage-tainted water have produced the disease, notably the scarlet-fever? (4) Had the typhoid fever, then prevailing in London, any influence in the production of this epidemic?

Dr. Haviland Hall was sure that bad sewage might give rise to various forms of disease, and cited an instance where peritonitis and erysipelas arose from an escape of sewer-gas in a public institution.

Dr. Farquharson was of opinion that the first class of Dr. Routh's cases had nothing to do with the last class, and were quite distinct.

Mr. Brudenell Carter thought the paper admirably demonstrated the perils of water-drinking. He always told his teetotal friends that, until they could guarantee to society a pure specimen of the commodity they so highly prized, instead of the present often dangerous mixture, they had better cease preaching the gospel of water.

Dr. Crisp, as a water-drinker, replied that human life was curtailed at least ten years by the use of alcohol. As illustrating the connection between diphtheria and sewage, he gave an instance of a house in Devonshire, where nine children died within a month from a species of diphtheria, quite unknown in the neighbourhood. On investigation the drainage of the house was found to pass into a pond, the water of which the children drank.

Mr. Cheyne had charge of Dr. Routh's cases in his absence, and distinguished three forms of disease—(1) a pure scarlatinal case; (2) cases of sore-throat devoid of rash or high temperature; (3) cases of erysipelatous sore-throat. The drinking-water was the only cause of disease, which could be demonstrated, as no proof of contagion existed.

Dr. Buchanan, in support of Mr. Carter, asked Dr. Crisp if he ever knew of nine children dying of alcohol in one house, as occurred in the melancholy instance in Devonshire. He set a high value on Dr. Routh's careful and elaborate paper, and noticed that the gap of fourteen days which intervened between the first and second batches of cases precluded any idea of infection. He had no doubt that both scarlatina and diphtheria had appeared in the Home, and that they prevailed together he was certain. Some of the cases had evidently nothing to do with either of these diseases, but must be classed with the erysipelas which appeared on the scene. He thought that a form of sore-throat of the same character as the well-known hospital sore-throat, but non-specific in kind, might and did arise from septic causes, such as the presence of putrid matter. As for the exact source of this epidemic, it appears to be traceable to sewage. The institution being flooded with sewer inhalations, instead of the ventilation described purifying the air, it probably assisted in freely diffusing the sewer-gas through the building. There being two methods of infection in this instance, the water and the air, it was difficult to distinguish which was the agent; but that the erysipelas might arise from septic matter dissolved in water ample evidence existed. In the epidemic outbreak at the Patriotic Asylum last autumn, erysipelas came on, followed by a curious form of peritonitis, which the late Dr. Anstie thought he traced to water-poison.

Dr. Theodore Williams inquired the amount of cubic space allowed per head in the building, and whether natural ventilation was relied on, as, if it were, there was little chance of keeping a crowded institution pure and wholesome. He had no doubt of the existence of sore-throat, non-specific in character, and arising from septic causes, and had noticed instances of it, occurring chiefly among servants who occupied the basement of houses, and therefore were in closer proximity to the drains.

Dr. Routh, in reply, said that both the beginning and the ending of the epidemic were characterised by erysipelas, and that notwithstanding all that had been said—and he was much obliged to the Society for discussing the matter so thoroughly—he saw no case made out for attributing the disease to anything else than poisoned water. In conclusion, the treatment consisted of effervescing salines, gargles containing chloride of potash, and the local use of tannin.

Monday, Dec. 14th, 1874.

CLEFT PALATE.

Mr. **William Rose** brought forward a case of cleft palate on which he had operated successfully. The patient, a young man, æt. 23, came under his charge about three months ago. He had a fissure extending through the soft and hard palate, to within half an inch of the alveolar ridge. He spoke of the development of the upper jaw and palate, which he illustrated by diagrams, and suggested a plan of bringing the maxillæ together immediately after birth in cases of very wide cleft. He described minutely Sir William Ferguson's new method of operating for simultaneous closure of fissure in the hard and soft palate (a drawing of which was shown) by boring holes through the margin of the hard palate for the passage of the threads, and then cutting through it with a chisel in a line parallel to and about half an inch from the edge of the cleft. By this means the edges of the cleft in the hard palate could be approximated. After dividing the levator palati muscle on each side, and carefully paring the edges, stitches could be passed through the holes in the hard and through the soft palate, and the edges brought into apposition in the median line. He demonstrated a new way of passing the threads. He spoke of Sir Wm. Ferguson's introduction of myotomy thirty years ago in the treatment of fissure of the soft palate as having quite revolutionised staphyloraphy, and expressed his firm belief that the recent introduction of osteotomy in the treatment of fissures of the hard, by Sir Wm. Ferguson, would rank high as an operation among the numerous contributions to practical surgery of the eminent surgeon. He also stated that Sir Wm. Ferguson, when he published a paper on the subject last April in the *British Medical Journal*, was not aware that any other surgeon had suggested such a course of procedure. It was, however, shown that Dieffenbach, in his "Operative Surgery," published in 1845, had proposed a somewhat similar operation; but there was no evidence to show that he had ever performed it on the living subject, and his successor, Baron von Langenbeck, had never adopted the suggestion. He added that Sir Wm. Ferguson had operated on more than forty cases by the new method of dividing the bone, and that in all the palate was improved, and that two-thirds of the cases were successful.

Mr. **Henry Smith** said that thirty years ago he had written out Sir Wm. Ferguson's original paper, in which staphyloraphy was mentioned, and had also assisted in most of that eminent surgeon's operations since. In the early ones, operation on the soft palate alone was attempted, and the results were not so favourable as under the new plan of osteotomy. Our Transatlantic brethren thought so little of staphyloraphy that they divided the soft palate afresh, and applied obturators. Mr. Smith considered that the natural coverings were far superior to artificial ones, and thought Mr. Rose's case was thoroughly successful, the fissures in the hard and soft palates being completely closed, which was a better result than had been achieved in his case, exhibited at the last meeting of the Society. Surgeons who proposed operation in these cases must be prepared for severe hæmorrhage, on account of the vascularity of the palate; this might be stopped by ice and other means; neither had it ever been known to be fatal. He dwelt at some length on the advantages of the gag, which enabled surgeons to undertake operations that had been almost impossible before.

Mr. **Oakley Coles** stated that it was the surgeons of America, and not the dental surgeon, who slit up previously closed and soft palates to introduce artificial structures. He considered, however, that surgery would accomplish much in this field, and that the time was coming when the mechanical treatment of cleft palate would be obsolete. The great drawback in the surgical results was that the patients seldom spoke intelligibly; he only remembered one instance where speech became perfect after the operation; and failure was attributable to the fact that the free border of the soft palate in these cases never reaches far enough back to touch the pharynx to act as an effective valve, and here the mechanical appliance is far more successful.

Mr. **Thomas Bryant** said that, after reading Sir W. Ferguson's osteotomy paper, he was at first sceptical, but now considered the operation a great advance. He wished to know whether, in the infant, silver sutures had actually been passed through the maxillæ to bring the fissures together. Of the old operation on the hard palate more than half had failed. How many of Sir W. Ferguson's forty cases were successful? There was no difficulty in piercing hard or soft palates, but in passing the stitches through, on account of the bleeding. Mr. Bryant introduced the stitches first, which facilitated matters, and reduced an operation of half-an-hour to a few minutes. He had some doubts as to the dividing of the levator palati muscle in every case, but thought a division of the pillars of the fauces was an improvement.

Mr. **Royes Bell** complimented the author on his skill, and stated that the speech in this case, though varying, continued to improve. The patient could sing. The hæmorrhage in these cases was much less than formerly.

Mr. **Francis Mason** remarked that Sir Wm. Ferguson's success was greater since he had divided the bone. Previously he had used an angular knife instead of Langenbeck's raspatory, and the sloughing of the parts was due, he thought, to his taking too thin a portion off. The maxillæ had been brought together in infants in America.

Dr. **Vanderveer**, U.S.A., questioned if American surgeons did slit up united soft palates. He had never heard of it being done in America. At Boston, Dr. Warren had tried Sir W. Ferguson's operation, and failed. He had also attempted it, and had succeeded in uniting the soft palate, but not the hard. He had come to England especially to gain information on the subject.

Mr. **Oakley Coles** referred the last speaker to the "Transactions of the Odontological Society."

Dr. **Crombie** recommended the galvanic cautery for dividing the bone, as causing less hæmorrhage than the drill.

Dr. **Drysdale** thought that obturators were very suitable for improving the voice, and quoted an instance of an actor in Paris remarkable for his good articulation, who, nevertheless, had perforation of the hard palate, cured to some extent by an obturator.

Mr. **Acton** used to deplore that syphilitic cases were not operated on in this way, but deplored it less now, as he noticed in the present case the voice was far from perfect.

Mr. **Mason** explained that his reasons for adopting the perforating method was that both Dieffenbach's and Langenbeck's led to extensive exfoliation of the bone.

Mr. **Gant** was pleased at the thorough discussion that had taken place. After tracing the history of the operation, he remarked that one difficulty was the complete closure of the cleft where the soft and hard palate met. In one case he had accomplished this by the use of heated wire.

Mr. **Rose** briefly replied, and the meeting adjourned.

IN THE LABORATORY.

ADULTERATION OF QUININE.

That this drug is often adulterated to a considerable extent is pretty well known; but few of our readers will be prepared for the shameful instance we are about to relate. One of our staff, some time ago, purchased a drachm of quinine at a respectable-looking chemist's shop in a large London thoroughfare. On putting a few grains into water it appeared slightly to effervesce, and his curiosity being thereby excited, an analysis was made, which revealed that this so-called quinine was a mixture of two parts of quinine with one of carbonate of soda. We record the fact as a most disgraceful fraud, and would suggest that public analysts might advantageously turn their attention to expensive drugs.

BORATES AS ANTISEPTICS.

Professor Lister has recently made a communication to the Medico-Chirurgical Society of Edinburgh on the use of boric acid as an antiseptic dressing. In the discussion that followed, several speakers testified to its value, especially in eczematous and pruriginous affections.

In a communication to the *British Medical Journal*, Dr. B. A. Rugg suggests that the efficacy of boric acid in aphthous affections may be due to its antiseptic power, and that it acts by destroying the fungous growth that causes the disease. He mentions the case of a child whose mouth was covered with aphthæ, and who was cured in a few hours by two applications of glycerine of borax; and he does not believe that such a result could happen if borax acted merely as a local astringent and sedative. This may, however, be an exceptional case.

Dr. Rugg thinks that salicylic acid may, perhaps, be found to act better than boric acid, as it is not so irritating, but that, at any rate, both have many advantages over carbolic acid.

CELLULOID.

Celluloid is a new substitute for ivory. As first prepared it consisted of a combination of soluble cotton and ether, or alcohol, but camphor was subsequently added to the alcohol. Finally, both alcohol and ether were dispensed with, and camphor alone mixed with the ground cotton pulp. The mixture hardens in drying, and becomes celluloid. This substance can be used for many purposes, and will, no doubt, find many useful applications in surgery. Several companies for the manufacture of different objects from celluloid have already been started in Philadelphia.

NOTES, NEWS, AND GOSSIP.

THE ORIGIN OF TRANSFUSION.

According to reliable records, transfusion was first practised in 1492 upon the person of Pope Innocent VIII. The operator was a Jewish physician. The experiment was tried three times. The result of the treatment was that the blood-donors, three in number, died, as well as the decrepit pontiff himself.—*Boston Medical and Surgical Journal.*

THE REGISTRATION OF DISEASES.

The Legislature of New Zealand has passed a law requiring every medical man to give information to the health authorities of the existence and place of all cases of zymotic diseases which come under his observation. What would British practitioners say if a similar law were passed in England?

NATURAL ANTISCORBUTICS.

General Sherman says that the *Agave Americana*, or Spanish bayonet, the fruit of the common prickly pear, and the succulent leaves of some of the varieties of the cactus that abounds on the deserts of Texas, New Mexico, and Arizona, furnish excellent specifics for that horrible disease the scurvy.—*Philadelphia Medical and Surgical Reporter.*

PRAYER VERSUS PRESCRIPTIONS.

Professor Tyndall's proposition to do nothing for a lot of patients but pray for them is literally carried out by a sect of English fanatics, who call themselves "the Peculiar People." When one of them falls sick, the others anoint and pray over him. Several of them have been tried for manslaughter for allowing their children to die without medical aid. They were acquitted on the ground of liberty of conscience. They refuse to vaccinate, on the same plea, and would not even allow surgical assistance in a broken limb. Our English medical contemporaries refrain from inquiring into the death-rate of this denomination. Perhaps it is just as well, in view of "business."—*Philadelphia Medical and Surgical Reporter.*

MEDICAL LATIN.

The German poet, Wieland, never lost his cheerfulness or good humour, and but a few hours before his death, having insisted on seeing his doctor's prescription, "I see," said he, "it is much the same with my life and the doctor's Latin, they are both at an end."—*Henry Crabb Robinson's Diary.*

MEDICAL JOURNALS IN JAPAN.

Japan possesses to-day its journal of medicine, under the name of Kin-Si-Setzu (Journal of Modern Medicine). Dr. Stuart Eldridge is the editor-in-chief. This journal, published at Jeddo, has obtained from the Japanese Government a guaranty of a circulation of a thousand numbers. The first number contains, among other articles, the following:—Studies on Strictures of the Urethra; Esmarch's Method; Necessity for the Education of Midwives in Japan; Concerning the Administration of Arsenic, &c.—*The Clinic* (Cincinnati).

From recent experiments Professor Lister has arrived at the conclusion that the septic matter present in water is not in solution, but consists of suspended insoluble particles.

OBITUARY.

Bent.—On the 23rd Nov., at Aldershot, Surgeon-General John Bent, Army Medical Department, in the 58th year of his age.

Bean.—On the 11th Dec., Dr. R. J. Bean of Lodge Street, Leeds, aged 49.

Boyd.—On the 14th Dec., at 2 North Crescent, Bedford Square, London, Sir William Boyd, Knt., A.M., M.D., in the 72nd year of his age.

Cumming.—On the 19th Nov., at Glasgow, Wm. Cumming, M.D., of Wigtown, aged 33.

Eaton.—On the 7th Nov., at Ballinasloe, co. Galway, of inflammation of the lungs, Richard Eaton, M.D., for fifteen years Medical Superintendent of the Ballinasloe District Lunatic Asylum.

Fleming.—On the 18th Dec., at George Street, Hanover Square, London, Hope Stewart Fleming, late of the H.E.I.C. Medical Service.

Gardner.—On the 14th Dec., R. Gardner, M.D., of Johnstone, Renfrewshire, aged 38.

Gillett.—On the 3rd Dec., at Vauxhall Bridge Road, S.W., Wm. Gillett, L.R.C.P.Ed., L.S.A.L., aged 48.

Gray.—On the 11th Dec., Jas. St. Clair Gray, M.D., of Belmont terrace, Hillhead, Glasgow, aged 27.

Handley.—On the 6th Dec., J. Handley, L.S.A.L., of Todmorden.

Hastings.—On the 20th Dec., suddenly, of heart disease, at his residence in Albemarle Street, London, John Hastings, M.D., aged 69.

Hayward.—On the 19th Nov., Geo. Hayward, M.D., of Ealing, formerly of Leeds.

Hawes.—On the 26th Nov., Robt. Hawes, M.R.C.S.E., of Wimborne Minster, aged 74.

Hester.—On the 9th Dec., Jas. Torry Hester, F.R.C.S.E., of Hastings, formerly of Oxford, aged 74.

Huddleston.—On the 15th Dec., at Barnstaple, J. N. Huddleston, M.D., of Roborough, Devon, formerly of Compton Terrace, Islington, aged 67.

Hughes.—On the 29th Nov., lost in the S.S. *La Plata*, off Ushant, John Rigby Hughes, M.D., of Guy's Hospital, and Runcorn, Cheshire, aged 30.

Huntington.—On the 15th Nov., F. Huntington, F.R.C.S.E., of Hull.

James.—On the 19th Nov., Thos. James, M.R.C.S.E., of Marine Terrace, Aberystwith, aged 58.

Leslie.—On the 2nd Dec., at Armagh, James Leslie, M.D.

Martin.—On the 27th Nov., at 37 Upper Brook Street, Sir J. Ranald Martin, C.B., F.R.S., aged 81.

Marks.—On the 28th Nov., of scarlatina, at 26 Hatch Street, Dublin, Emily, wife of Alex. H. Marks, M.D.

MacIntyre.—On the 28th Nov., James MacIntyre, L.R.C.S.Ed., of London Road, Glasgow, aged 45.

Matthew.—On the 3rd Dec., Alex. Crombie Matthew, M.R.C.S.E., of Albyn Place, Aberdeen.

Mitchell.—On the 15th Nov., at Pentney Vicarage, Norfolk, Thos. Robinson Mitchell, M.D., of Jarrow-on-Tyne, aged 68.

Price.—On the 3rd Dec., John Cooke Price, M. & L.S.A.L., of Dovercourt, formerly of Stamford Hill, aged 78.

Robinson.—On the 27th Nov., at Robert Street Regent's Park, Andrew Ker Robinson, Surgeon, aged 33.

Rayner.—On the 9th Nov., A. P. Rayner, M.R.C.S.E., of Shawbury, Salop.

Roche.—On the 9th Dec., at his residence in London, Thomas Roche, M.R.C.S.E., Staff Surgeon R.N., aged 42.

Buck.—On the 8th Dec., David Buck, M.R.C.S.E., of Cirencester, aged 50.

Seymour.—On the 24th Nov., at Surbiton, Maria, widow of Edward James Seymour, M.D., F.R.S., in her 78th year.

Smallman.—On the 23rd Nov., at Lincoln, J. C. B. Smallman, M.D., of Willingham, near Gainsborough, aged 40.

Smith.—On the 25th Nov., Wm. Scott Smith, L.S.A.L., of Eastwood Notts, aged 74.

Stevens.—On the 5th Nov., J. N. Stevens, M.R.C.S.E., of Princes Place, Plymouth, aged 63.

Smyth.—On the 10th Dec., at his residence, Manorcunningham, John Smyth, Esq., M.D.

Steel.—On the 14th Dec., at Priory Lodge, Cheltenham, James Steel, M.D., late of the H.E.I.C.S.

Sutherland.—On the 25th Nov., at George Street, Croydon, William Sutherland, M.D., M.R.C.S., in his 63rd year.

Thompson.—On the 8th Dec., at Bath, Dr. J. Thompson, half-pay Royal Artillery, aged 87.

Ward.—On the 4th Dec., at Bombay, A. V. Ward, M.R.C.S.E., Surgeon-Major Indian Army and Presidency Surgeon, aged 54.

Wilson.—On the 29th Nov., at Bryanston Street, Portman Square, Wm. T. Wilson, L.K.Q.C.P.I., late Staff Surgeon H.M.S. *Iron Duke*.

NOTICES.

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TO CORRESPONDENTS.

⁂ We beg to thank those gentlemen who have, during the past, kindly furnished us with abstracts of their lectures, communications to societies, contributions to journals or other productions, and to say that such abstracts will always receive attention.

⁂ Correspondents are requested to write legibly, and on one side of the paper only.

☞ Books for review, exchange journals, and literary communications to be addressed to the Editor of The Doctor, at the Office, 20 King William Street, Strand, London, W.C.

Dr. Wiggins.—We are much obliged to you for your suggestion, and will endeavour to carry it out. It always affords us pleasure to receive practical suggestions for the improvement of The Doctor.

THE DOCTOR.

LONDON, FEBRUARY 1, 1875.

Multum in parvo.

VIVISECTION.

At the present time earnest discussion is being raised on both sides of the Atlantic as to whether vivisection be justifiable. As one of our American contemporaries misunderstood our position when we referred to the question last year, we think it desirable to restate our views. We then recorded an act of what we considered wanton cruelty, and we regret that it would be very easy to mention many other parallel instances as having come under our observation in London.

We do not condemn vivisection *in toto.* We consider that in the hands of men like John Hunter, Sir Charles Bell, Marshall Hall, Brown-Séquard, Claud Bernard, and others, it is perfectly justifiable, for it has added, and will add, to our means of alleviating human suffering; but we hold also that even in the hands of such accomplished men, no unnecessary torture should be inflicted—for instance, the boon of chloroform ought not to be withheld on the ground of either trouble or expense, and we believe that every rightly-constituted mind would be glad, whenever possible, to avail himself of this agent.

Researches carried on by qualified men differ altogether from vivisection for the purpose of demonstrating to students well-known facts; still more from the performance of operations on living animals by students themselves. The suggestion that every student should verify the ordinary facts of physiology is monstrous.

Nor could we altogether approve the experiments performed at Norwich last August, and which have been made the ground of prosecution by the Royal Society for the Prevention of Cruelty to Animals.

The discovery of M. Magnan was well known to those interested in the subject. It had been endorsed by the French Academy, and required no further corroboration. The repetition of his experiments, therefore, at the meeting of the British Medical Association, was neither more nor less than a kind of exhibition; and we are glad to notice that only a small number of members were present to witness the new sensation provided by the managers in the hope of making the meeting attractive.

No possible good could come from the demonstration at Norwich; all who wished to inquire about the facts could understand published descriptions. The experiments, therefore, merely pandered to a love of sensation. Rather than such an exhibition, let us return to another display of a wonderful wine. That commercial idea really proved more successful; and who knows but that the managers of the Association may make another hit.

This Norwich incident has its comic aspect, for the Editor of the *British Medical Journal* has had the impertinence to threaten Sir William Fergusson for daring to give evidence on behalf of the prosecution, and has referred the worthy Baronet's conduct to the Committee of Council! How Sir William must tremble! This self-appointed Committee of Council, with no claim to represent the profession, may meet and resolve what they please concerning the esteemed surgeon who once condescended to preside over the Association.

The experiment we described last year as performed in the Brown Institution has since been repeated there and elsewhere, and it will be remembered by our readers that we inserted a letter from Dr. Sanderson impugning our statements. To his letter we appended an expression of surprise, and asked him whether he could deny that such experiments were performed in the Brown Institution. To that challenge we have never received a reply, and we beg publicly to announce that the cruelties to which we have adverted are regularly practised in the Brown Institution, and that for the purpose of teaching. In fact, that institution may be looked upon as the centre of vivisection, whence its pupils go forth to practise elsewhere. What would the benevolent Mr. Brown have thought had he foreseen to what his legacy for a hospital for animals would lead!

We commend the case to the Royal Society for the Prevention of Cruelty to Animals.

Before closing, we may correct an error into which the *Daily Telegraph* has fallen. In an article on the 25th ult. our contemporary quotes the experiment we described last year, but attributes it to a small "Manual of Experimental Physiology for the Use of Hospital Students." It is but just to state that the description in question is from the article in The Doctor of June 1, 1874.

CHRONICLE.

ON THE COMBINED ADMINISTRATION, CHIEFLY HYPODERMICALLY, OF CHLORAL, MORPHIA, AND ATROPIA.

Prof. Roberts Bartholow, of Cincinnati, has submitted to the New York Society of Neurology and Electrology a most interesting paper on this subject, which appears in full in *The Clinic*, January 2nd.

Dr. Bartholow began by stating the desirableness of further knowledge of the reactions which ensue when remedies affecting the nervous system are conjointly administered. He had to offer to the Society a condensed summary of the results obtained from the simultaneous administration of chloral, atropia, and morphia.

Chloral differs from chloroform, when injected subcutaneously, in the more decided systemic effects, and the less local impression on the sentient nerves of the former. As regards the systemic effects, the action of chloral is very much the same when administered hypodermically as by the stomach. The chief danger is an arrest of the respiratory movements.

Chloral does not exert any chemical action on atropia when the two are held in solution together—for dilatation of the pupil of a cat takes place when the combined solution is instilled into the eye. Dilatation of the pupil also takes place when they are administered hypodermically together.

An apparent antagonism is observed, as regards their action on the heart, when the solutions of chloral and atropia are placed in contact with the heart of a frog, when in position in the chest after division of the medulla, or when the heart is removed. The action of the heart is further found to continue much longer when a lethal dose of chloral is administered together with atropia. In rabbits the same result is produced by the conjoined administration of the two agents.

Atropia is found to prolong the chloral narcosis several hours in rabbits, and diminishes the sensibility to pain.

In man the excitant action of atropia hinders the occurrence of the chloral narcosis, but rather deepens the sopor, when it at last supervenes. The effects of atropia last much longer, and are apparently in no way prevented by chloral.

Morphia deepens in every way the effects of chloral. The author of the paper found, in the course of some experiments on himself, that many of the unpleasant effects of morphia are modified, as regards the wakefulness caused by the latter, but are not modified as regards the subsequent nausea, vomiting, headache, vertigo, and constipation. When the two agents are administered conjointly, a much less quantity of chloral is necessary in order to produce sleep.

These agents act much more favourably when administered simultaneously. Chloral causes sleep, morphia relieves pain, atropia prevents or lessens the depression in the respiration and cardiac movements caused by the other two, while it contributes to their cerebral effects.

These physiological studies are confirmed by the therapeutical results. The combination of chloral, morphia, and atropia is adapted to those cases of *insomnia* caused by pain, or in which chloral or morphia alone merely increases the cerebral excitement—as in hypochondria, puerperal mania, &c. This combination is also indicated in cases of fatty and irritable heart. When *pain* is to be relieved, chloral is not so serviceable as the combination with morphia and atropia. The local administration—that is, the insertion of the medicament at the site of pain—is more effective than the merely systemic impression. This is especiallly the case in tic-douloureux, sciatica, and coccydynia, which are much more effectively treated by injections made in the neighbourhood of nerves, the seat of pain. The combination of a local irritant and benumbing agent with a systemic anodyne is more curative than either used singly.

In cases of *muscular spasm*, the author of the paper had obtained excellent results from the combined use of chloral, morphia, and atropia, and he especially called attention to the efficacy of these agents in the *cramps* of *cholera*. Many cases of *spasmodic asthma*, *hay-fever*, &c., have been benefited by their conjoint administration.

The following are the formulæ employed by Dr. Bartholow:—

℞ Chlorali hydratis, ʒi.;
Aquæ destil., ʒiv. M.

S. Thirty minims contain seven and one-half grains.

℞ Chlorali hydratis, ʒi.;
Morphiæ sulph., gr. i.;
Aquæ destil., ʒiv. M.

S. Thirty minims contain seven and one-half grains of chloral, and one-eighth of a grain of morphia.

This combination contains relatively a proper quantity of morphia for ordinary purposes.

℞ Chlorali hydratis, ʒvi;
Morphiæ sulph., gr. iv.;
Atropiæ sulph., gr. ¼;
Aquæ destil., ℥ij. M.

S. Thirty minims contain seven and one-half grains of chloral, one-eighth of a grain of morphia, and one-one-hundred and twenty-eighth of a grain of atropia.

In this formula an attempt is made to preserve the physiological balance in the relative powers of these three agents.

A NEW POULTICE.

M. Lefort, reporting to the Académie de Médecine on a new form of cataplasm invented by M. Lelièvre, speaks in the highest terms of its excellence. It is prepared by saturating two superimposed layers of wadding with a solution of *Fucus crispus*, and drying them in a stove after they have been submitted to strong pressure. In this way a sheet of the consistence of cardboard is produced, a portion of which is cut off when wanted, and soaked in hot water for fifteen or twenty minutes, this swelling it out and filling its tissue with a mucilaginous fluid. It has been tried in several hospitals with great satisfaction. It can be prepared in large quantities beforehand, as when once dried it will keep for a long time. It has been recommended by M. Gosselin, M. Verneuil, M. Larrey, M. Démarquay, and others.

MERCURIAL POISONING FROM ARTIFICIAL GUMS.

DR. W. B. WOODMAN, of the London Hospital, reports several cases in which symptoms of mercurial poisoning appeared traceable only to the use of artificial gums or palates covered with vermilion. Dr. Woodman has made numerous experiments with different artificial gums, palates, &c., and has found vermilion present in all the specimens examined by him. As, however, the temperature of the mouth seldom exceeds 37° or 38° C., and saliva is a very dilute solution of the substances it contains, the possibility of the warmth of the mouth and the action of the saliva, or of articles of food, producing volatilization or solution of the pigment has been questioned. Dr. Woodman believes, however, that poisoning occurs in both ways, and possibly also by conveyance to the stomach of minute particles worn off in the process of mastication. As regards the first method, or volatilization, he satisfied himself by experiment that nearly all the mercurial compounds are somewhat volatile at lower temperatures than 98° or 100° F.

Dr. Woodman's paper certainly deserves attention as revealing a source of mercurial poisoning not hitherto suspected, and one, moreover, very continuous in its action. His cases of mercurial poisoning from this cause extend over 12 years, and Dr. W. was in every case thoroughly satisfied as to the cause. He has certainly, as he himself remarks, not displayed undue haste in bringing the matter before the profession, and his observations thereby derive more value and deserve a more careful attention.

MASSAGE IN SPRAINS.

M. FONTAINE writes (*Archives Méd. Belges*, 3, 1874) on the use of massage in sprains. He has himself had great success. M. Fontaine first covers the limb with oil, and the part is rubbed with one or both thumbs, in gentle movements, from the extremities upwards, following, in general, the direction of the muscles and tendons. The affected, painful spot is rubbed gently, but the healthy neighbouring parts more energetically, and the muscles at times thoroughly kneaded. This manipulation lasts from a quarter to half an hour, and is repeated 3 times daily. In the interval the limb is raised and bandaged. M. Fontaine thinks that the massage acts by spreading the blood extravasated (through rupture of vessels) over a large surface, and thus promoting absorption. But whatever may be the *modus operandi*, M. Foutaine has obtained good results in sprains by the application of massage.

RHEUMATISM.

DR. T. S. DOWSE, in a paper read before the Norwich meeting of the British Medical Association, and published in full in the Journal, says that in the treatment of rheumatic fever the first thing to do is to eliminate the acid products of the diseased state; and the next, to relieve pain. To bring this about, he has for the last 3 years been in the habit of packing most of his cases in a wet blanket, and then rolling them up in dry blankets, so as to promote profuse sweating, and also increase the temperature. Finding this rough method give good results he at once adopted a systematic mode of procedure, which he thus describes: The bed is covered with india-rubber sheeting; over this is laid a blanket which has been wrung out of hot water. The patient is then enveloped in the blanket, and covered with 6 folds of dry blanketing. By this the temperature is raised, and profuse sweating results: the former, if need be, is assisted by the administration of brandy in half-ounce or ounce doses every hour, and the latter by giving freely warm milk and water. If the temperature exceed 102° F., then the stimulant is unnecessary.

Dr. Dowse continues the treatment for 3 days. He finds that after the third pack the pain has completely subsided, and the sour taste usually disappears.

We may remark that this method of treatment is by no means new.

THE HISTOLOGY OF THE LARYNGEAL MUCOUS MEMBRANE.

SINCE the observations of Klein and Burdon-Sanderson on the relations between the occurrence of tubercle and the existence of adenoid tissue in various organs in the normal condition, the discovery of the latter in healthy organs has assumed, says the *Lancet*, increased importance. It has been known for some time that growths of adenoid tissue exist in the mucous membrane of the larynx of some animals in the form of closed follicles, but until lately it was believed that it did not occur in the same situation in man. Thus Luschka states that the human laryngeal mucous membrane does not show normal adenoid tissue with a reticulum, but only exceptionally does one find a growth much resembling it in the solitary follicles on the edge of the ary-epiglottic folds, and of the epiglottis itself, occurring either as a diffuse infiltration, or in the form of projecting nodules. Verson also says that the mucous folds over the false vocal cords may be thickly studded with lymph-corpuscles. Dr. Heitler has recently studied this subject with the object of ascertaining whether adenoid tissue exists in the healthy human larynx, and has published the results of his researches in *Stricker's Medizinische Jahrbucher*, vols. iii. and iv., 1874. He carefully rejected all cases in which there was any suspicion of catarrh, and in all the healthy cases examined, he found the adenoid tissue to be of constant occurrence. The situations in which he found it most abundant were the ary-epiglottic folds, particularly where the squamous epithelium passes into columnar; but it was also found constantly in the mucous membrane covering the arytenoid cartilages, especially their upper part, and over the cartilages of Santorini, diminishing lower down, and also towards the junction of the two halves of the thyroid cartilage. He also found it in the mucous membrane covering the first part of the ventricle of Morgagni, and in the folds around the sacculus laryngis. Heitler mentions also that he has constantly observed in the healthy larynx a diffuse infiltration of the submucous tissue with small elements of cellular character, which were first observed by Luschka, and which Rheiner regards as the sign of a catarrhal condition. This infiltration varies greatly in its amount and situation. Heitler considers that the characteristic peculiarities of the laryngeal mucous membrane are the existence of this small-celled infiltration, and of masses of adenoid tissue, and also the great number of large glands; and he believes that these peculiarities account for the frequent occurrence of ulcerations, which are usually of secondary character.

EVERSION OF THE BLADDER.

DR. G. THOMSON, of Oldham, reports in the *Lancet* a case of eversion of the bladder in an adult female over 40 years of age. When Dr. Thomson was summoned to the case, the patient had been suffering for about twenty-four hours from acute cystitis, of which he found abundant proof in the recent urine. The patient said that while passing water about half an hour previously she felt something come down, and was immediately seized with a violent straining pain. On examination Dr. Thomson found, instead of the anticipated uterine displacement, a small nodulated tumour encrusted with a white calcareous-looking deposit, afterwards ascertained to be phosphatic. He imagined he had some growth from the urethra to deal with; but it occurred to him that it might possibly be a case of eversion of the bladder, although he says he never heard of such an accident occurring to an adult. In view of the disastrous consequences which might ensue from removing a portion of the wall of the bladder, he determined to ascertain if such was the case. With the assistance of Dr. Yates, the patient was chloroformed, and Dr. Thomson then passed his finger along the urethra (which happened to be unusually large and dilatable) by the side of the pedicle of the tumour. He found that the pedicle arose from the posterior wall of the bladder, which confirmed his suspicions, and Dr. Yates having arrived at the same conclusion, the eversion was reduced. This was done after carefully removing the phosphatic encrustations. Dr. Thomson introduced his finger into the bladder, and carefully explored the surface from which he found the pedicle to arise, and he found no trace of a tumour or pedicle of any kind whatever in any part of the interior of the bladder.

A full opiate was administered, and the patient kept in bed.

The cystitis rapidly disappeared, and she made a good recovery.

RENT IN THE MUCOUS MEMBRANE OF THE LARYNX.

We find among the excellent abstracts from *Virchow's Archiv.* in the *Glasgow Medical Journal* one of Professor Stoerk's on this subject. According to the author, this is an exceedingly common result of chronic laryngeal catarrh. In this affection the mucous membrane is swollen, and that part of it which lies in the cleft between the arytenoid cartilages often becomes very much so. It sometimes becomes three times its normal thickness, and may project between the cartilages, and so hinder the shutting of the glottis, thus producing hoarseness. The epithelium on the surface of the swollen membrane also gets swollen and eroded. And now a deep inspiration may tear the thick mucous membrane, and once formed, the rent is apt to deepen. After a time the transversus muscle may be interfered with by the rent almost reaching it, and a permanent aphonia result from this muscle being unable to close the glottis. The subjective symptoms are often very marked, but may be very insignificant. After the occurrence of the rent, the inspiration of cold air produces a feeling in the larynx as if a raw surface were exposed at a definite spot. Then there is often a feeling of tickling at the same spot, and hawking to relieve it. This spot is also particularly irritated by swallowing irritating fluids, especially alcoholic. Later, cough supervenes, but a cough hardly to be distinguished from hawking. Hoarseness is also a common symptom, which may be caused either by the swelling of the mucous membrane or paralysis of the transversus muscle. Occasionally an acute inflammation is set up with cramp of the larynx. Astringents should be applied, and the edges of the fissure cauterized. But the cauterization must be very carefully executed, the caustic being applied exactly to the edges, else serious damage may be done. For the cure of the fissure itself, such an application of nitrate of silver in substance is usually necessary.

DIFFERENCES BETWEEN FACIAL PARALYSIS FROM COLD AND FROM WOUNDS.

Dr. Onimus (*Gaz. Med.*, and *Presse M. Belge*) mentions the case of a young girl who, after a fall, had paralysis of the facial nerve of the right side. Ten days after the accident, the palsied muscles still responded a little to faradism, and it was only after the 22nd day that they remained unmoved to the force of this current. In palsies from cold, this loss of contractility for the induced currents as well as exaggerated contractility for the continuous currents are observed from the first few days, and often on the third day.

Dr. Onimus explains this difference by the fact that, in order to obtain the abolition of the farado-muscular contractility and the augmentation of the galvano-muscular contractility, it is necessary that there should be alteration of the intra-muscular nervous filaments. In the case of facial palsies from cold, the cold acting on the peripheric filaments, it is probable that the intra-muscular nerves are attacked from the first, and directly; it is for this that the different reactions of contractility appear so rapidly and quicker than in the case where the lesion attacks the nerve trunk directly. In the latter cases the intra-muscular filaments are only altered consecutively, and consequently more slowly.

After having briefly reported the experiments which science possesses, and which, more or less, throw light on this subject, the author terminates thus:—

All these physiological experiments have thrown but little light on the curious phenomenon as to the difference of action of induced and continuous currents. The true question is this: Why are these cases of paralysis at the periphery when the loss of contractility exists for both kinds of currents, whilst in others, it is only wanting for the induced currents.

In the latter case, not only do the continuous currents determine the contraction of the palsied muscles, but, to undergo this contraction, they require a current less strong than that required to make healthy muscle of the same kind contract.

The peripheric muscles of the facial nerve are not, indeed, only characterised by the loss of farado-muscular contractility, but especially by the augmentation of excitability to continued currents. A current of two or three elements makes a paralysed muscle contract, whilst it requires a current of twelve to fifteen elements to make the same muscle contract when healthy.

In the normal condition continuous currents determine with difficulty the direct contraction of the muscles, and the contractions are obtained more easily by acting on the course of the nerve trunk. In cases of palsy this is no longer the case, the inverse takes place.

In certain slight cases of facial palsy, or again, quite at the commencement or at the time of cure, we cause contraction with induced currents, and it is often difficult to have a very clear idea of the diminution of this contractility, but always then, however slight the paralysis be, and at whatever period the examination be made, there is exaggeration of excitability for the continuous currents. This enables us to differentiate central palsies from peripheral ones.

THE ACTION OF QUININE.

Dr. W. A. Hammond, of New York, has published in the *Psychological and Medico-Legal Journal*, which he edits, an account of some experiments which go far to overturn the notion that quinine produces anæmia of the brain, and to establish the converse—viz., that this drug really produces cerebral congestion. This is a very important point in reference to our daily practice.

ANEURISM.

In the Lettsomian Lectures Mr. Maunder gives the following as his conclusions:—1. That no case of aneurism is to be regarded as necessarily incurable. 2. That some cases of internal aneurism are apparently cured by absolute and prolonged rest, restricted diet, and other medical treatment. 3. That, when possible, compression, either proximal or distal, is to be employed in addition. 4. That in all aneurisms in which treatment by ligature is known to be a very fatal operation, the above rules are to be first applied. 5. That the treatment of progressive aneurism at the root of the neck by the distal operation is justifiable after medical treatment has failed. 6. That in rare instances only may an aneurism be treated by ligature before compression has been tried and has failed. 7. That digital is to be preferred to instrumental compression. 8. That chloroform and morphia are valuable aids to compression. 9. That chloroform will probably prove to be a more effectual agent than morphia in all cases, but the more hazardous. 10. That the value of morphia should be more thoroughly tested.

AMPUTATION OF THE TONGUE.

Prof. A. Caselli reports (*Bulletino delle Scien. Med.*, *New York Medical Journal*) the case of a child, nine years of age, which had wounded its tongue by a fall. A cancerous tumour followed, which in two years extended over the entire right half of the tongue, except its summit; the tumour also invaded the central portion of the left half and the right half of the floor of the mouth. At the point where the tumour first appeared there was a large ulcer, from which flowed blood and ichorous matter. There was no ganglionic enlargement, but the child was anæmic and emaciated.

The patient entered the hospital Sept. 1, 1873. There was then a very acute glossitis, consecutive to the mastication of irritating substances. There was also some obstruction to respiration. In a few days, while the child was nourished by means of the œsophageal catheter, introduced through the nostril, the inflammation yielded to local bleedings and cold applications. On the eleventh day Prof. Caselli commenced the removal of the entire tongue by Rizzoli's method, dividing the lower jaw at the median line, and applying a ligature. The fifth day, as the tumour was slow in disappearing, he recovered it by means of Chassaignac's écraseur without the least hæmorrhage. In thirty days the wound had entirely healed and deglutition was normal. Although three quarters of the tongue had been removed, the child was able to pronounce *s* and *z*.

ANÆSTHESIA.

Dr. J. Helberg, of Christiana, proposes (*Berliner Klinische Wochenschrift*) a new method for relieving difficult or impeded respiration during anæsthesia. The following is his mode of procedure. Standing behind the recumbent patient, the two thumbs of the operator are placed on the symphysis of the lower jaw, and the index fingers hooked behind the ascending ramus of the jaw. The bone is then pulled forcibly forward (anatomically). The force should be applied as if the operator wished to lift the patient up by his jaw-bone. During anæsthesia, the head of the bone slips forward with a perceptible jerk, and the whole lower jaw overlaps the upper jaw. As soon as this is accomplished, which it is easily in children, a deep full inspiration follows, and continues whilst the bone is held in position.

EMBOLON IN THE MUCOUS MEMBRANE OF THE TYMPANUM.

Wendt (*Archiv. der Heilkunde*, vol. xiv., *Boston Medical and Surgical Journal*) gives the result of an examination in a case of embolon. A young woman, who died from metastatic abscesses in the lungs and liver, after an operation on the scapula, five days before death, suddenly lost the hearing of the right ear, and three days after, that of the left ear, also. The dissection showed, in addition to some old, the following recent, pathological changes: great swelling, loosening and fragility of the mucous membrane around the foramina leading to the labyrinth on both sides, and on the left side, discolouration from blood, and numerous blood corpuscles in the tissue. The two stapes were immovably fixed in this swollen membrane. The investigations of Prussak and Brunner have shown that the mucous membrane of the tympanum is supplied by terminal arteries, the same as the liver, kidneys, retina, brain and lungs; those of Cohnheim, that the closure of a terminal artery may produce the very changes found here in the parts supplied by it. "In this case, the region of the embolon was, in the left ear, the upper anterior and the whole posterior part of the median wall and roof of the tympanum; it was sharply defined, discoloured bluish-black, swollen, œdematous, filled with blood-corpuscles, degenerated, and with a changed epithelium. In the right ear, the posterior half of the labyrinth wall was involved in similar changes."

Although the embolon itself could not be found in this case, the well-marked pathological changes, the suddenness of the attack, and the freedom from preceding inflammation, which might have caused similar swelling, would seem to render the diagnosis certain.

MASSAGE IN ABSCESS OF THE CORNEA.

In a recent number of The Doctor we referred to massage as a therapeutic measure that might be adopted with advantage in certain cases. In the *Independencia Medica*, of Barcelona, Dr. Osio recommends the application of massage in abscess of the cornea. He says that everyone unconsciously practises it when rubbing the eyes. At the Ophthalmological Congress of 1872, held in London, Donders called attention to the practice as one that had yielded him excellent results. Dr. Osio has employed massage of the cornea with success in certain diseases of the eye. He has more recently combined the use of aqueous vapour with massage. He employs the following method:—An apparatus charged with an infusion of camomile is placed before the patient's eyes (which have previously been covered with a double layer of fine muslin) at such a distance that the vapour reaches the eyes at a temperature of from 90° to 100° F. At the same time massage of the eye should be performed with the fingers over the muslin, rubbing it up and down, from side to side, and finally by a circular movement pressing upon the centre of the cornea. At intervals the apparatus may be brought nearer, so that the eyes may for a few moments be subjected to steam of a higher temperature than that indicated. This vapour bath should be continued for a half or three-quarters of an hour, and during this time the massage should be repeated from eight to ten times, with a duration of from one to two minutes upon each occasion.

A NEW WAY OF OPERATING ON THE LARYNX

The *Medical Times and Gazette* gives an account of a new method of operating on the larynx, which has been devised by Dr. A. Eysell, of Halle. Every laryngoscopist, he says, must be aware how difficult it is to reach a tumour growing in the lower part of the larynx, which is not movable enough to be driven above the level of the vocal cords by forced expiration. He has, however, succeeded in removing them by the following method:—Whilst observing the larynx by means of the laryngoscope, an exceedingly elastic needle is passed through the skin and crico-thyroid membrane, into the larynx, exactly in the median line, and immediately beneath the thyroid cartilage. The needle is then made to transfix the tumour, and by depressing its handle the latter is forced up into the ventricle of the larynx. No hæmorrhage takes place, the only pain felt is during the transfixion of the skin, and no local mischief has followed even frequently-repeated operations. If it be intended to cauterise or tear away the tumour, the patient is directed to hold the mirror, or better still, the needle; and in this way Dr. Eysell has succeeded in removing fibromas from the lower part of the laryngeal cavity. He afterwards attempted to operate on tumours, with the needle itself, which could not conveniently be attacked through the mouth, and for this purpose he employed the needle used by Schwartz for performing paracentesis of the tympanum; but even this ought to be gently heated before use, in order to make it more pliable. It was passed, as before into the larynx, and several incisions or pricks made into the tumour, which was then lifted up and cauterised. In a case where the vocal cords were adherent to one another for their anterior two-thirds, as the result of a suicidal cut throat, which caused considerable shortness of breath on slight exertion, a narrow tenotome was passed through the scar, 0.5 centimetre broad, into the larynx. When the point appeared behind the triangular adhesion, the handle was firmly depressed, and by drawing the knife downward the cords were separated almost to their origins. In the same way, no doubt, injections might be practised on laryngeal tumours, by the employment of a needle-pointed syringe. It may be impossible to perforate the thyroid cartilage in old people on account of calcification.

COPAIBA IN DROPSY.

Dr. Falconer (*Canada Lancet*, Dec., 1874) feels confident that very few practitioners have given this drug a fair trial in ascites. Passing by cases of cirrhosis and chronic peritonitis, with their accompanying effusions, in which, after re-accumulation after tapping, he has succeeded in not only diminishing but in completely removing the fluid by the use of copaiba, he refers to a case of ovarian dropsy, which he treated successfully by the drug. Copaiba is the diuretic, *par excellence*, and never fails in removing the serum through the kidneys, except in chronic albuminuria. It obviates the use of elaterium or gamboge, tapping, or ovariotomy, in many cases.

CHLORAL IN PARTURITION.

Dr. Lyman, of Boston (*Boston M. and S. Reporter*, Dec. 3), asked, at a meeting of the Obstetrical Society of Boston, for an expression of opinion on the use of chloral in the first stage of labour. In one of his cases it had given great comfort. There were pains, not very severe, but tedious, during 48 hours. The patient took in all two drachms, fifteen grains at a time, and was allowed to take that dose whenever she wanted it, but at no less interval than 30 minutes. It deadened the pains, but did not relax the os. He thought it perfectly safe. Of late he had used croton-chloral, which he thought was still better.

UTERINE FIBROIDS—CÆSARIAN SECTION.

Dr. Cazin, of Boulogne-sur-Mer (*Obstetrical Journal of Great Britain and Ireland*), brought forward a case at the Lille meeting of science where pregnancy occurred in a woman with fibroid tumour of the uterus. The patient was 39 years old, and at the sixth month of pregnancy was recognised to have uterine fibroid tumours on the posterior and lower wall of the organ. Labour came on in the seventh month: after four days' suffering the waters ruptured and the hand escaped, the child being alive; but as it could not be extracted either by version or forceps, Cæsarian section was employed. The most minute precautious were taken: there were hæmorrhage and syncope, inertia of the uterus, and distension of the belly to such a degree that it became necessary to puncture the bowel to give exit to the gas; there was palsy of the bladder, and an abscess formed between the uterus and abdominal walls. In spite of all this the patient recovered, and also the child.—*Gaz. Méd. de Paris*, Oct. 3, 1874.

VARICES.

Dr. Linon, of Verviers, has, for the last three years, treated varices by the local application of perchloride of iron. Compresses of flannel are dipped in an aqueous solution of the chloride (containing about 2½ drachms to 8 ounces of water), then wrung out and applied by means of a flannel bandage, which is to be kept only moderately tight.

A NEW METHOD OF EXTRACTION OF CATARACT.

La France Médicale says that lately Dr. R. Castorani brought before the Parisian Academy of Sciences a new method for the external linear extraction of cataract. This consists in the opening of the cornea, or sclerotica, to the extent of four or five lines, by a simple puncture of a broad, curved keratotome. Iridectomy is then performed, and the lens is extracted within the capsule. The principal advantage of this method consists in the easy adaptation and reunion of the margins of the wound even when all the vitreous humour has been removed. Reunion is much easier after linear puncture than after linear section, and chiefly by reason of the action of the lids in making pressure. The aqueous humour is also more completely retained by this method, for the same reason, and it is claimed that thus is obviated any danger of interocular hæmorrhage after removal of the vitreous humour, as the continual flow of the aqueous humour fills up the ocular cavity, and preserves its natural form and volume.

DROPSY OF THE ANTRUM.

The Dental Cosmos (December number) publishes a paper on this subject by Dr. F. Fay, of Brussels, which was read by him before the American Dental Society of Europe.

Dr. Fay says that dropsy of the antrum consists in the accumulation of a mucous fluid, secreted by the lining membrane of the antrum, which communicates with the middle meatus of the nose by a small opening. In health the quantity of pituitary fluid secreted by this sensitive membrane is but small; but in inflammation the secretion becomes much more abundant, and tends to collect in the antrum. Its escape is prevented—1stly, by inflammation of the membrane which passes through the opening; and, 2ndly, by the thickening of the secretion.

Some authors attribute the cause of dropsy of the antrum to the perfect closure of the opening, but this cause has not been clearly proved, and, at any rate, is, according to Dr. Fay, only a secondary cause. Boyer says that this disease occurs mostly in young persons, who often attribute it to a blow received on the maxilla. It is said that it may be caused through the root of a tooth penetrating into the antrum, but Dr. Fay does not consider this a sufficient cause unless the root of the tooth be diseased, in which case, however, its presence might cause inflammation of the adjacent tissues, and thus spread the disease. Dubois speaks of a case of dropsy which was caused by the presence of a tooth imbedded in the antrum on the sub-orbital surface. Dr. Fay thinks catarrh to be one of the most likely causes.

Whatever the cause, a quantity of mucus collects in the antrum, and remains there for some time before producing any apparent effect on the face, or having any great influence over the bone itself. The quantity of fluid inclosed in the cavity must be considerable to force the parietes out of their ordinary position. The anterior wall generally protrudes first, and it would strike one that the reason is that the anterior wall is the thinnest; but this is not the case, for the nasal wall is the thinnest. This may be attributed to the fact that the inferior or palatine surface being obliquely situated has its lowest point to the front, and then the fluid contained in the antrum has its greatest weight thrown on the anterior wall. If the pressure is equal on all sides, it is hard to conceive of the existence of such a tumour so long as the natural opening of the antrum exists. The anterior wall forms a tumour, which gradually increases; it is spheroidal, smooth, and hard; the skin scarcely changes colour, and moves easily over its surface. As the tumour grows, the bone gets thinner, and will give way on pressure; it may even be absorbed, so that the tumour will be covered only by the integuments of the cheek.

The fluid contained in the antrum is generally of a yellow colour. It was mentioned just now that this disease generally acted on the anterior wall of the antrum, but it sometimes happens that the dilatation takes place in all directions. In such a case the diagnosis is more difficult, and it may be mistaken for some hard tumour occupying the antrum. The diagnosis is generally easy, but there are certainly exceptions. Before coming to a final decision as to a case of dropsy, it may be well to make an exploratory puncture, which is a simple operation, and in many cases will prevent performing a more serious one for the removal of a supposed malignant disease.

Nélaton recommends that an exploratory puncture be made, and says that a free incision is good not only to evacuate the fluid, but also to make a thorough examination of the parts.

Dropsy of the antrum may be confounded with mucous cysts, and some authors describe the two together; but the skin over a mucous cyst presents a greyish-blue appearance, while it has a yellowish appearance in dropsy; mucous cysts are also accompanied by pain, while in dropsy there is little or none. Dropsy of the antrum may also be confounded with abscess, osseous cysts, and osteo-sarcoma. Osseous cysts can only be distinguished from dropsy by puncturing.

As regards treatment, Dr. Fay says that our first aim should be to evacuate the fluid, and next to get rid of the cause. Dr. Lamorier proposes to perforate the maxilla between the malar fossa and the third upper molar. Dr. Fay, however, thinks that there are several objections to this—viz., 1st. That the space left for the opening is not large enough; 2nd. That the antrum is very difficult to explore from this position; and, 3rdly. That it sometimes disfigures the patient through the necessity which sometimes arises of dividing the lips at their commissure. Another method is to perforate the maxilla in the canine fossa. Dr. Fay considers this method to be free from the foregoing objections. In a case of dropsy caused by a diseased tooth or periodonteal membrane, Dr. Fay thinks that the cause should be removed by extracting the tooth. Some authors recommend the removal of a sound tooth for the cure of dropsy, as they say that perforating the alveolus is a good plan to cure the disease; but, in Dr. Fay's opinion, if a tooth is sound, it should not be removed. Several other operations have been tried for the cure of this disease—viz., catheterism, perforation of the palatine arch, and perforation through the floor of the orbit. This last operation has only been performed once—viz., in 1819, by Dr. Bertrand. None of these methods are so desirable as the perforation of the canine fossa. The recurrence of the disease may be prevented by injections, and by the introduction of pieces of lint. Injections may be made with warm water, astringents, glycerine and water, dilute carbolic acid, &c., &c. These injections must be repeated several times daily. If the introduction of lint is preferred to injections, either dry lint or mèches previously saturated in carbolised oil or ointment can be used. This plan is most easily adopted when the antrum is opened in the canine fossa, which is the plan Dr. Fay recommends. In introducing lint, care should be taken to fill the antrum as full as possible, in order to prevent the fluid from accumulating again.

JOTTINGS FROM JOURNALS.

MONOBROMIDE OF CAMPHOR.

This substance, so termed by M. Wurz, is a compound in which one equivalent of the hydrogen of camphor is replaced by an equivalent of bromine, or brome, as it would be better to term it. The bromide of camphor lessens the frequency of the heart's action as well as that of the inspirations of the lungs. M. Deneffe, of Ghent, has employed it with success in a case of delirium tremens. Its hypnotic and antispasmodic properties are undoubted, and Hammond, of New York, has found it most serviceable in infantile convulsions and in cases of inveterate hysteria. Otherwise, it has been resorted to repeatedly in Paris, and promises to prove a useful addition to our Pharmacopœia.—*Gazette des Hôpitaux.*

SPASMODIC ASTHMA.

Dr. Geo. Wood prefers tincture of belladonna, given before the paroxysm, in the treatment of asthma, to chloral. He admits, however, that the latter is the next best remedy. He gives the tincture of belladonna in doses ranging from twenty to sixty drops, just before going to bed. The patient sleeps in place of rousing up at the usual period of the paroxysm, and awakens, when he does awaken, very greatly refreshed.—*Philadelphia Medical Times.*

IMPERFORATE RECTUM.

Instead of thrusting in a trocar in the presumed direction of the bowel, M. Verneuil, in cases of imperforate rectum, recommends resection of the coccyx in order to facilitate the formation of a perineal anus.—*Bulletin de la Société de Chirurgie de Paris.*

ANTIDOTE FOR PHENIC ACID.

The editor of the *Pabellon Médico* strongly commends M. Haseman's procedure in regard of employing the alkalis and alkaline earths, and more especially the saccharate of lime. This is readily prepared by adding five parts of caustic lime to a solution of ten parts of sugar in forty of distilled water, and leaving it to digest ten days before filtering.

COTTON-WOOL DRESSINGS FOR WOUNDS.

Not long ago cotton was repudiated as a dressing on various counts. Now, however, it has been used most successfully. During the Franco-Prussian war, and subsequently, Dr. Alphonse Guerin, of the Hôtel-Dieu, resorted to cotton dressings, and has since employed them with every advantage. Believing in the germ theory of septicæmia and putrefaction, he, Dr. Guerin, finds that cotton dressing realises the entire or approximate prevention of pyæmia, erysipelas, and gangrene, painlessness and immobility of the injured parts, as well as the possibility of safely removing the patient. The subject is one of great moment, and the practice has been very forcibly advocated by Dr. Thomas Curtis, of Boston.—*Boston Medical Journal.*

MANUFACTURED CAOUTCHOUC.

It is, or ought to be, well-known that irrespective of the caoutchouc tree, this substance abounds in the milky juices of many plants; for example, lettuce and dandelion. Quite recently a company has actually been formed in London, Ontario Province, for the extraction of caoutchouc from milkweed—a plant extensively met with in the American woods. The juice of the milkweed—which, by the way, is an excellent vegetable—contains some four per cent. of rubber. The plant is partially decomposed, steamed, then treated with coal-tar naphtha, which, being then distilled, leaves the residuary caoutchouc in the solid form.—*Canadian Pharmaceutical Journal.*

POISONING BY THE SULPHATE OF ATROPINE.

A case is related in the *Lyon Médical* in which a child three years and some months old had swallowed a few granules, each containing one milligramme of the sulphate of atropine. Vertigo, delirium, and excessive dilatation of the pupils followed almost immediately. Dr. Crolas administered, alternately, small doses of a solution of opium, along with some tannin and coffee. The evil symptoms abated and the little sufferer did well.

TYPHOID FEVER.

M. Valette read before the Société de Médecine a *résumé* of twenty-one cases of fever treated by Brand's method of cold immersion. All the cases did well. Among the rest was a child of eleven, in whom typhoid fever had supervened on whooping-cough. The whooping-cough disappeared, but returned during convalescence.—*Lyon Médical.*

DEAFNESS REMOVED BY POLITZER'S METHOD.

The subject was a girl of ten, who had quite, or almost quite, lost her hearing after an attack of catarrh. Air was injected into the Eustachian tube several times, the nostrils being closed, and the air introduced by means of an india-rubber bag and tube during the act of swallowing. The hearing, as has been stated, was nearly lost, and various means had been fruitlessly resorted to, but the patency of the Eustachian tubes being restored, as thus, by Politzer's ingenious procedure, the young patient entirely regained her hearing.—*Lyon Médical.*

INTERMITTENT FEVER.

Dr. Polli, of Milan, claims for the treatment of intermittent fever by means of the sulphite of potash and sulphite of soda more permanent results than when preparations of quinine are exclusively resorted to.—*La Tribune Médicale.*

BRAVERY UNDER FIRE.

M. Leo Testu, a distinguished pupil of the Bordeaux School of Medicine, rescued, under fire, General Sonis, who had fallen at the head of his troops, and restored him from a state of unconsciousness. For this exploit he was very properly rewarded by M. Thiers with the decoration of the Legion of Honour, which the President of the Republic now seeks to withdraw on the score that M. Testu has already received a military medal, an act of red-tapeism against which the *Gazette Hebdomadaire* and *Abeille Médicale* most justly protest.

TEST OF DEATH.

Dr. Angelo Monteverdi states, as the result of a great number of experiments, that the subcutaneous injection of liquid ammonia produces invariably a vinous red spot, with very sensible projection of the hair-bulbs, while in real death these are as invariably absent.—*Archivio di Medicina, Chirurgia, ed Igiene.*

DISCHARGE OF AN AWN OF TIMOTHY GRASS AFTER FOUR MONTHS' IMPACTION IN THE RIGHT BRONCHUS.

A curious case of this nature is recorded in the *Canada Lancet* by Mr. MacCargow, of Ontario. The head of grass was accidently inhaled by a child of six from a spool into which he had stuck the head of timothy in order to blow it out again. The grass was at length expectorated, after a severe fit of coughing, but not till preceded by a long continuance of bronchitic irritation and almost fatal hæmoptysis. The writer of these remarks met, a few years since, with the instance of a lady who casually inhaled a fragment of oyster-shell. The irritation, cough, and suffering, followed by great emaciation, lasted for months, and the case was given over. One day, however, after a violent fit of coughing, up came the fragment of shell. The evil symptoms, as in the case of the boy, ceased like magic, and the lady regained, and now enjoys, the most perfect health.

SMALL-POX PITTINGS.

Dr. J. Ward, of Grange-over-Sands, recommends (*Brit. Med. Jour.*) honey as a local application to prevent pitting in small-pox.

TOPICS OF THE TIME.

ERGOT AND ERGOTINE.

There are few drugs which have lately attracted so much attention as ergot on the part of thoughtful therapeutists. Its very remarkable effects, so long known, make the question of its mode of action peculiarly interesting, and the investigations that have recently been made seem likely to open up a much wider field of application.

At present it seems probable that its primary action is to stimulate the ganglionic system, and through it the vascular system and non-striated muscular fibre. Even its remarkable effects on the uterus are believed to be due solely to its effect upon non-striated muscular fibre, and this view explains its special effect in the pregnant state, when those fibres are so enormously increased. To the same influence may be traced its power of contracting blood-vessels, demonstrated by Brown-Séquard, and which has led to its use as a remedy in hæmoptysis and other hæmorrhages in addition to those from the uterus, in which cases it has so long been employed on account of its power of causing contraction of that organ. This power of the drug has led Messrs. Burness and Mavor* to employ ergot in puerpura hæmorrhagica, and their opinion of its value is confirmed by a case related by Dr. W. L. Lane (*British Medical Journal,* Sept. 5, 1874).

We are not sure whether it is with the same definite idea of its sphere of action, but it has been employed perhaps with more success than might have been expected, in fibroid tumours of the uterus. Thus, Hildebrandt (*Beitrage zur Gynakologie und Geburtskunde,* vol. iii.) relates a number of cases of fibroma and myoma of the uterus treated by the hypodermic injection of ergotin. He believes that the most favourable conditions for this treatment are the following:—When the consistence of the tumour is that of an elastic fibroma rich in muscular tissue; when its seat is sub-mucous; when the walls of the uterus are healthy and capable of contraction, neither thinned nor rendered rigid by exudation; and when there has been no inflammation in the vicinity.

Dr. Emmons lately related to the Chicago Society of Physicians and Surgeons (*Chicago Med. Journal,* November) a case of uterine fibroid successfully treated by the hypodermic injection of ergotine. The symptoms were distressing, and the hæmorrhage constant. The tumour was attached to the anterior wall of the uterus, and extended from the neck to the fundus; a sound passed six and a half inches. An aqueous solution of ergot, representing one grain to the minim, was employed, four minims gradually increased to twenty minims being injected over the deltoid daily. In seventy-one days the cavity of the uterus measured only five and a half inches. The treatment was continued for several months, when hardly a trace of the tumour could be found. There was no particular inconvenience or irritation produced at the points of puncture, especially after laying aside the use of the alcoholic preparation of ergotine. He concludes that in true interstitial fibroid of the uterus, treated hypodermically with the aqueous solution of ergot, we may expect in the large majority of cases eminently more satisfactory results than by any other mode of treatment, or by operation.

As long ago as 1869 the Berlin Medical Society published in their Transactions a paper by Langenbeck recommending the injection of one-half to two and a half grains of liquid extract of ergot under the skin covering the aneurism, the injection to be repeated every two or three days. In one case of aneurism of the subclavian in close proximity to the innominate, this treatment diminished the size of the tumour, and allayed the more urgent symptoms. In another case of a small aneurism of the radial, the tumour disappeared after one injection, reappearing soon after, only however to fade away, leaving at the end of a week no trace of its existence.

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* "The Specific Action of Drugs on the Healthy System; an Index to their Therapeutic Value."

With regard to the various preparations employed, we have ourselves generally preferred Bonjean's extract, which, when freshly made, we believe to be efficient. Dr. Lombe Atthill, as the result of numerous experiments with ergot and ergotine, has arrived at the following conclusions :--1. That Wigger's pure ergotine is inert, and useless for hypodermic injection. 2. That Bonjean's ergotine hypodermically injected exerts a marked effect on cases of uterine fibroids, lessening the amount of blood lost and lengthening the periods, but that its use is liable to be followed by the formation of abscesses. 3. That the *extractum ergotæ liquidum*, B. P., is still more efficient in checking the uterine hæmorrhage occurring in these cases, but that it causes at the time severe pain, and that troublesome abscesses are likely to form at the site of the injection.

An important paper by Köhler appeared in *Virchow's Archiv.* for October last, which has been carefully summarised in the last number of the *Glasgow Medical Journal*. This paper describes the results obtained by a series of comparative experiments with the substances to which the name "ergotine" has been incorrectly applied. The ergotine prepared by Wigger is an extract of the constituents of ergot, soluble in alcohol, but insoluble in water; whereas that of Bonjean contains the constituents soluble in water, but insoluble in alcohol. It is thus obvious that these substances, although called by the same name, must be very different, and that neither is a distinct chemical compound, and it is misleading to call them by a name suggestive of that. Bonjean's ergotine (the watery extract) stimulates the depressor centres in the heart, and the vaso-motor centres in the medulla oblongata, thereby producing slowness of pulse and contraction of the arteries, with consequent increase of the blood-pressure. Large doses paralyse the heart. Wigger's ergotine has no influence on the heart or arteries, but acts as an acrid poison, irritating mucous membranes, and even producing convulsions. Both ergotins reduce the temperature and retard respiration, but Wigger's more than Bonjean's. Bonjean's ergotine reduces the irritability of the peripheral motor nerves when it acts directly on them, while Wigger's increases it. Both widen the pupil, and both diminish the irritability of the sensory nerves. From these facts it appears that when the object is to cause contraction of the blood-vessels, slowness of pulse, reduction of temperature, and reflex action, then Bonjean's is the ergotine to use. Wigger's is useless as a hæmostatic, and when it is wanted to reduce temperature or reflex action it is not so good as the other, on account of its narcotic properties. Wigger's ergotine, on the other hand, increases the irritability of the peripheral motor nerves; hence to produce labour it may be best to combine the two and give the ergot in substance. An infusion, of course, only gives the constituents soluble in water.

Dr. P. C. Williams, at the annual meeting of the Medical and Chirurgical Faculty of Maryland, last April, read a paper on "The Hypodermic Use of Ergot in Post-partum Hæmorrhage." The paper is given in full in the Transactions, and also in the *St. Louis Medical and Surgical Journal* for December. Three cases are related, in all of which the effect of the hypodermic injection in arresting the hæmorrhage was almost instantaneous. Dr. Williams, on the strength of these cases, recommends the remedy as prompt, safe, and efficient. He used the fluid extract, but he mentions that Dr. Squibb has made a solid extract, which is much used in New York. This solid extract has only to be rubbed up with an equal quantity of water to make it available for hypodermic use.

CROUP AND DIPHTHERIA.

Sir Wm. Jenner has published during the month (*Lancet*, Jan. 2 and 19) a "Clinical Lecture on Croup and the Diseases that resemble it." This lecture we should gladly see diligently studied by every practitioner and student. It is full of instruction put in the simplest form. To give a summary of it is almost impossible, from its condensed form; we therefore select some points that deserve the special attention of the profession, and state Sir William's views in his own words :—

> It was once supposed that membranous inflammation of the larynx was peculiar to children. It is now known that it is not so. It occurs, not so very unfrequently, in persons of advanced life. Diphtheria is an acute specific disease attended by inflammation of the pharynx, having as its result exudation of lymph. It is a specific inflammation arising from a specific cause. The specific inflammation in diphtheria has a tendency to spread, to spread over the pharynx in all directions, to pass upwards to the nares, downwards to the larynx, and, in rare cases, to the œsophagus and stomach. From the pharynx it may spread down the trachea and into the bronchi. So that in diphtheria we get, not unfrequently, membranous inflammation of the larynx. But membranous inflammation of the larynx, I have told you, is croup. Is there, then, a membranous inflammation of the larynx distinct from the acute specific disease diphtheria? Are there a true croup and a diphtheritic croup? Certainly, if you were to place in the hands of the best pathologist the larynx of a child who had died from membranous inflammation of the larynx, the so-called idiopathic croup, and that of one who had died from a true diphtheritic inflammation of the larynx, he would be unable to distinguish the one from the otder. There is no anatomical character by which he could say, "This is true croup; this is diphtheritic inflammation of the larynx." If, however, the pharynx was also found to be the seat of exudation of lymph, he would say, "This is undoubtedly diphtheritic inflammation of the larynx." But it is beyond question, that true diphtheritic inflammation may be limited to the larynx; that, in exceptional cases, the pharynx escapes the exudation. Seeing, then, that there are no anatomical characters to distinguish the one disease from the other, are there any clinical characters by which the two affections may be separated? It has been supposed that the presence of albumen in the urine would be sufficient, and I formerly laid much weight on this distinction. But later years have satisfied me that in cases which present all the characters of true croup, which are

sporadic, spread to no other person in the house, come on apparently from exposure to cold and damp—that in such cases albumen may be present in the urine. It has again been urged that true croup has no tendency to spread; but this manifestly should no more separate a single case from the diphtheritic croup than should a single case of scarlet fever, because it did not spread, be separated from other cases of scarlet fever. The cause, again—the fact that some cases of croup come on after distinct exposure to cold and wet—cannot be sufficient to separate croup from diphtheritic croup, for it is beyond question that a considerable number of cases of diphtheria do, to all appearance at least, date their origin from exposure to cold and wet. I have seen several solitary cases of true diphtheria thus originating; not spreading, or spreading, to other persons in the house, as the case may be. So my opinion has undergone some modification, and I am inclined now to the belief that there is no such disease as idiopathic, simple, membranous inflammation of the larynx. I say I am inclined to this belief. I am not sure that it is true; but as I formerly thought that the weight of evidence was in favour of their non-identity, I am now inclined, from my further experience, to think that the two diseases are really identical, that the so-called croup is really diphtheria.

Membranous inflammation of the larynx is one of the gravest diseases; it kills rapidly. If the termination be fatal it usually is so within a few days from the outset; rarely does the disease last a week, supposing that the windpipe has not been opened. The disease is usually preceded by uneasiness in the pharynx, sometimes by well-marked evidences of diphtheria; often, however, the pharyngeal symptoms are trifling, and the gravity of the illness is only appreciated when the child wakes in the night with croupy breathing—that is, with rough, hoarse, loud, lengthened respiration. The difficulty of inspiration is due to two causes. At first it is due to the swollen condition of the mucous membrane, and also largely to the superadded spasm. Subsequently it is due to the false membrane narrowing the passage, and also largely to the superadded spasm. The paroxysms of difficulty of inspiration from which the patient suffers are due to the spasm. The disease is attended by a certain amount of febrile disturbance, and there is a little uneasiness in the layrnx, perhaps some pain and tenderness. The lymphatic glands adjacent to the larynx are commonly enlarged and tender. (They require to be felt for.) There is hoarse, rough cough, with expectoration of at first a little glairy mucus, and subsequently pieces of false membrane—that is, of tough lymph.

To avert death in cases of membranous exudation into the larynx we open either the larynx or the trachea; the trachea in a child; the larynx in an adult. We select the larynx in an adult because of the facility with which it is reached. We are driven to open the trachea in a child because the larynx is too small to admit the tube. The opening into the windpipe still further interferes with the power of coughing. The patient in croup is, as I have said, unable to close his larynx well; still he can close it to a certain degree, and he is able to cough to that degree. The tube of course he is unable to close, and hence acrid matters about the tube are more liable to be drawn downwards, and therefore to become impacted in the lung, to produce pneumonia, and, in their passage downwards—so acrid is the matter—to produce bronchitis. It must be remembered that the inflammation extends downwards, not merely because the inflammation itself has a tendency to spread, but because the matter thrown out is acrid, and has a tendency to produce inflammation, which, in the constitutional state of the patient, will be a membranous inflammation. Thus, in some cases of diphtheria, the ear is the seat of membranous inflammation, and acrid matter as well as lymph is poured out. It runs down the outer side of the ear. As it passes down it excites inflammation, and the inflamed surface becomes covered with a false membrane. That this false membrane is not the result merely of extension of the inflammation is probable from the fact that if a blister is applied to a person suffering from diphtheria, the raw surface frequently becomes covered with lymph, with a false membrane, with a diphtheritic exudation. You will thus understand that the fluid exuded is an irritant; that this irritant produces inflammation; that the inflammation in the constitutional condition is attended with an exudation of lymph. It is a specific inflammation, because the person is suffering from a specific disease, just as when a person is the subject of constitutional syphilis, the local inflammations assume frequently a syphilitic character, or in the subject of cancer, local injury may cause changes of texture cancerous in nature.

This leads me to a point of some practical importance in regard to tracheotomy. It is commonly stated that the bronchitis which so frequently follows tracheotomy in diphtheria is the result of the entrance of the cold air through the tube. It is said that in ordinary breathing the air is warmed as it passes through the mouth and nose and the pharynx and larynx, and so it is warmed air only which comes in contact with the bronchial tubes; that the entrance of cold air excites inflammation, and hence that many patients operated on for tracheotomy in croup die from bronchitis. To prevent this entrance of cold air, and I should say also of dry air, the patient's bed is surrounded with blankets, and a tube discharging moist vapour is introduced within the blanket-curtains, so that the patient may breathe a warm and moist air.

It seems to me that if the explanation I have given you be correct, there is no need for these special means—for these blankets and hot vapour. We know that if the larynx be opened for any other affection—for example, such a case as we have now in the hospital—there is no tendency to the occurrence of bronchitis, and the patient walks about and breathes the ordinary air, with very little protection, and without danger. A little protection may be necessary. Not only are these special means unnecessary, but in the disease diphtheria they are most injurious. They are most injurious because they tend to produce that exhaustion which is the cause of the fatal termination in so many cases during the second week of their illness. The relief which the patient experiences when you remove all this apparatus is marked. You must have seen it in the women to whom I have referred. Thus you will understand that I think it most important for the success of the treatment of croup, should tracheotomy be performed, that the patient should be kept in a moderately warm atmosphere, a moderately moist atmosphere, but an atmosphere only so moist as may be produced by a kettle on the fire throwing a little moisture into the room, only so warm as shall be agreeable to the patient. I am sure that I have seen cases terminate fatally that would have recovered had they not been thus over-nursed, over-cared-for; had, that is to say, the origin of the bronchitis been properly appreciated.

The *Lancet* has also published during the month a lecture on this subject by Dr. George Johnson, who in many respects holds similar views to Sir W. Jenner. Dr. Johnson rejects the doctrine of previous blood-poisoning, and thinks that the exudation is the direct result of a local action set up by the poison having gained access to the mucous membranes. He thinks the diphtheritic poison sets up exudation of membrane just as cantharides raises a blister. Dr. Johnson calls attention to a very interesting point in reference to the poisonous nature of the membrane—viz., the *auto-infection* which must obviously result from the very frequent passage of air into the lungs over the morbid exudation in the throat, and the less frequent passage of food and the secretions of the mouth down the gullet to the stomach. One of the greatest dangers in cases of diphtheria is the tendency of the exudation to pass down the air-passages into the larynx, the trachea, and even into the minutest ramifications of the bronchi. This tendency in the exudative process to pass downwards is, perhaps, in part explained by the gravitation of the morbid secretions. Trousseau remarks (page 523) upon the tendency which cutaneous diphtheria has to pass downwards from the shoulder to the arm, from the neck to the back, and from the belly to the loins, and he says: "It is very probable that the propagation of the diphtheritic inflammation is accomplished by the irritation induced by the long contact of the serous discharge which bathes the part as it runs downwards, or is retained by the dressings in particular situations." This seems a very probable explanation of the downward tendency of the disease when it affects the skin; it may in part explain the tendency of the diphtheritic exudation to invade the air-passages; "but," says Dr. Johnson, "it seems obvious that the inspiratory current of air passing over the morbid exudation in the fauces must carry with it infecting materials into the air-passages, and thus explain the fatal tendency of the disease to invade the larynx, the trachea, and the lung."

If, as we have reason to believe, adds Dr. Johnson, the breath and the oral secretions of a diphtheritic patient are so poisonous as sometimes to convey the disease to the attendants who are brought within their noxious influence, it can scarcely be doubted that the extension of the disease within the body of each patient is favoured by the process of auto-infection.

It is an obvious inference from this view of the pathology of the diphtheritic process that the persevering application of disinfectants to the fauces and air-passages constitutes one of the most important points in the treatment of the disease.

Dr. Johnson also expresses emphatically his entire concurrence in the conclusions long since arrived at by Bretonneau, Trousseau, and all the leading French pathologists, that all cases of so-called croup which are associated with the formation of false membranes in the air-passages are essentially diphtheritic; and, on the other hand, that what we in this country call inflammatory croup, or catarrhal laryngitis, never results in the formation of false membrane. It is surprising, he says, that practitioners of large experience can have any doubt upon this subject; and although we find even in some of the most recent English text-books that perplexing attempts are made to distinguish between "true membranous" croup and diphtheritic croup, Dr. Johnson pronounces the attempt hopeless and most confusing to the student, for it is certain that membranous croup and laryngeal diphtheria, as we now see them, are one and the same malady.

Concerning the question of the distinction between croup and diphtheria, we may observe that after a very important discussion the Academy of Medicine of Florence came to a resolution amongst others which seems well to express the difficulties felt and the most widely-spread opinion. As these resolutions of the Academy to which we have referred, six in number, were formally adopted, and have not yet been published in English papers, we think well to give them.

The Academy resolved—

1. In the impossibility of elevating to a pathognomonic symptom the position of the exudation—whether on the surface or in the substance of the mucous membrane—we can only distinguish true diphtheria by the extension of the process, the infiltration of the connective, sub-mucous, and peri-glandular tissues, the specific engorgement of the lymphatic glands accompanied by slight pain and other well-known phenomena of the disease. The majority of the facts, however, in past epidemics, as well as in the existing (a) one, prove that both croup and diphtheria may easily accompany or follow each other so as to appear to be due as to time and seat to the same morbid processes.

2. Clinical observation is in favour of the existence of true primitive croup, which may even be observed during an epidemic of diphtheria.

3. Diphtheria is a disease which arises in the manner of epidemics, and gives rise to a contagious principle.

4. [The Academy resolved to abstain from a definite opinion as to whether diphtheria is originally a general or local disease, and expressed the opinion that in our present state of knowledge the question could not be settled.]

5. No means exist of determining whether any medicines can prevent diphtheria. Cauterisation with nitrate of silver, sometimes used with this intent, has proved more injurious than useful.

6. At present no specific for diphtheria, general or local, is known. Bleeding now and then employed is to be condemned. The utility of some local measures is demonstrated. Caustics have succeeded, but are generally worse than useless. The general indications depend on the individual, who requires support both by hygiene and medicine. The indication for tracheotomy is narrowing of the larynx threatening immediate death, but regard must be had to the condition of the patient.

Dr. J. Baker, in a paper read before the Missouri Medical Society (*St. Louis Medical and Surgical Journal*), maintains that membranous croup is essentially different from diphtheria. He describes at length the differences between the two diseases, and remarks that some writers treat the subject in such a manner as to make it difficult to decide of which they are treating. Both diseases are attended with a coagulable exudation, but Dr. Baker says that in diphtheria this is formed not merely upon the mucous membrane, but within its substance, a distinction which we doubt if many observers will admit. Like every one else, he admits that the most important distinction between cases or groups of cases relates to treatment.

M. Roger, in a lecture on croup at his clinique, said that clinical observation taught us that there is a false croup and a true croup. False croup was simply inflammatory laryngitis, complicated by œdema in severe cases; but in false croup *what are called false membranes never exist.* With respect to true croup, it had been said that there were two kinds—

(a) This refers to the last epidemic of diphtheria in Florence.—ED. DOCTOR.

viz., *inflammatory*, or *strangulated*, and *common* croup. *Localised* croup had also been called *herpetic* croup. It would be better to call it a *mild* form, in opposition to the generalised or malignant form. As to the contagiousness of croup, it was very great. With respect to treatment, it was all-important to distinguish with care the *first period*—that is to say, the *anginous period*, for croup suddenly setting in was very rare.

The anginous period was almost invariable, and usually characterised by sore-throat, a little pain in the throat (*amongst children sore-throat is not painful*), some redness and cough, and a slight dyspnœa. This period was latent, and passed in general unperceived by the patients. Sometimes one discovers *false membranes*. What puts one on the track of the disease is *adenitis*. The sub-maxillary glands, those at the angle of the lower jaw, and even those of the lateral and posterior cervical region are tumefied. The cough presented nothing particular. This period lasted two or three days. Then came the phenomena of the *laryngeal period*.

According to M. Roger, there are tolerably simple means of distinguishing the true from the false croup. Thus, croup never commences all at once, but after two, three, or four days of prodromata. Œdematous or erythematous laryngitis, on the contrary, commences directly with laryngeal symptoms; between midnight and one o'clock in the morning the cough resembles a sort of barking, the voice is retained, and the respiration is free in the intervals of the attacks. Sometimes this laryngitis is more intense, and the attacks become more continuous, the fever is considerable, but the voice is not completely extinguished as in the true croup. Finally, by auscultation, one cannot perceive the absence of the vesicular murmur.

The inhalation of aqueous vapour is now pretty well recognised as a therapeutic measure to be adopted in treating croup. Dr. Racles, of Constantina, advocates (*El Pabellon Medico*) the use of a gum-elastic tube leading from a vessel containing water maintained in ebullition by burning alcohol. The better way, however, is to immerse the little sufferer in a suitable bath containing water kept at 100° F., or even preferably to wrap him up in a child's blanket which has already been wrung out of water at 100 F. A dry warm blanket or sheet ought to envelope this in its turn.

Waldenburg employs the inhalation of lime-water for the cure of chronic croup of the bronchi, and by this means has in one case removed the disease in forty-five sittings. The disease had lasted for four years or longer, and casts of the bronchi had been expectorated from time to time.

Dr. J. Solis Cohen, in his useful little work on "Croup in its relation to Tracheotomy," adopts the following conclusions:—

1. An anæsthetic is admirable, used with caution.
2. *Careful dissection* should be made, and arrest of hæmorrhage accomplished if possible before opening the trachea.
3. The windpipe should be opened as near as possible to the cricoid cartilage.
4. A piece of the trachea should be excised, or a dilator used.
5. Strict attention should be bestowed upon the after-treatment.

Niemeyer, in his well-known Text-Book of Medicine, says that it is well-known that children not infrequently die of croup with symptoms of dyspnœa in whom no false membrane can be detected at the post-mortem examination, nor any other change which would account for the phenomena of asphyxia. He attributes the cause of death in these cases to paralysis of the infiltrated and relaxed muscles of the larynx. If false membranes are present, both in- and expiration are obstructed; if, however, there is paralysis of the laryngeal muscles, and especially of the crico-arytenoideus posticus, inspiration alone is interfered with.

M. E. Bouchut lately delivered a lecture at the "Hôpital des Enfans Malades" on the indications and contra-indications for tracheotomy in croup. M. Bouchut divides croup into three periods—1. That of exudation; 2. That of suffocation; 3. That of anoxhæmia, or asphyxia. In the first period tracheotomy is, of course, never required, but the question of operating may be raised as early as the second period, for then the child has paroxysms of apparent strangulation; but, as M. Bouchut observes, it is only suffocated, not in a state of anæsthesia from the accumulation of carbonic acid. An emetic often suffices to relieve the child whilst in this condition, so that M. Bouchut thinks it is not often necessary to operate in this period; rather, he adds, it is always best, if possible, to avoid operating, He would rather renew the emetic, from which he has obtained excellent results. When ordinary emetics fail to act, he administers apomorphia, which he thinks has a special influence over the suffocating dyspnœa consecutive on croup.

It is in the third period that tracheotomy is mostly indicated. This begins, according to Bouchut, with anoxhæmia. Sensibility, at first impaired, is at length destroyed. The anæsthesia produced by the accumulation of carbonic acid is thus, for Bouchut, the signal for tracheotomy. This anæsthesia is not sudden; it comes on by degrees, and he therefore waits until it has attained a certain degree of intensity.

Before Bouchut pointed out this anæsthesia as the best indication for tracheotomy, it was customary to fix the attention on the countenance, which becomes blue in the period of suffocation; but this symptom is unreliable, for sometimes pallor may take its place. It appears, then, that M. Bouchut relies upon emetics until the third period, when asphyxia with anæsthesia supervenes. Then, according to him, the indication for operation is formal and certain.

But there are several contra-indications, and, first of all, age; for in children under six months M. Bouchut says that tracheotomy has been tried but does not succeed. After fifteen or sixteen months he thinks it may be tried, but success is very doubtful, so that the operation begins to be indicated towards the age of two years; but even then he would abstain if the child presented great debility. A second contra-indication is complication with scarlatina. In measles it may be tried, but the result is very uncertain. As to pneumonia, if it is simple we may operate, but not if it is embolic. Dulness on percussion and mucous râles may be produced by the excessive bronchial secretion and the other hindrances to respiration. In such a case, after tracheotomy, the pneumonia will disappear. Not so if it has arisen from an embolon caused by endocarditis. It is the heart, then, in such a case, that assists the diagnosis. If the pneumonia be due to cardiac thrombosis tracheotomy is useless. Finally, tracheotomy is contra-indicated in certain general diphtheritic symptoms. If there be albuminuria it can seldom succeed, and if there be in addition nasal discharge it is absolutely useless.

Sir J. Cormack, in a paper on Diphtheria read before the Norwich meeting of the British Medical Association, just published in the *Journal*, said it was unsafe to found our treatment of diphtheria only upon what we ourselves have seen and done. Unless the practitioner is conversant with the experience of others as well as his own, he may long slumber under a delusion ; but the time may come when, in spite of his cherished remedies, local and general, he will see a large proportion of the attacked perish from croup, or be saved only by tracheotomy. The use of local applications was fraught with infinite danger. Many have received the diphtheritic poison in the spit of their patients, involuntarily ejected on the application being made, and have died. If we applied anything to the throat, we could only do it with safety if we wore a mask. But all potent applications to the throat were in favour with those who had seen most of diphtheria. Iodine, nitrate of silver, &c., were said to produce increased exudation ; while in other cases, where the exudative tendency was moderate, they seemed to do little or no harm. The only local application he now used was the glycerole of borax, *Brit. Pharm.* It promoted the separation of the pellicle, and did not irritate the mucous membrane. Touching the differential diagnosis of simple membranous sore-throat from specific disease diphtheria, the author thought that it could neither be determined by the presence nor by the absence of fever, nor by any other than one test—a test simple and sure :—

Apply a small blister to the arm or elsewhere : if the case be diphtheria, the said surface will become covered with a diphtheritic pellicle ; if it be not diphtheria, no false membrane will appear.

Mr. T. Prangley read a paper before the Norwich meeting of the British Medical Association, published in full in the *Journal*, founded on the observation of fifty-six cases of diphtheria which came under his care at Aylsham during an epidemic which prevailed in 1868. The cases had been of all degrees of severity. He regarded the amount of engorgements of, and deposit on the tonsils as a valuable prognostic sign ; and said one of the worst signs was the extension of the disease to the nares. The propagation of diphtheritic membrane to the larynx was also an ominous symptom. Regarding treatment, he said that in every case he applied tincture of iodine (48 grains to ʒi.) locally to every part of the throat covered with membrane, at least once every twenty-four hours, and also ordered the inhalation of iodine-vapour with steam. The general treatment was supporting and stimulating. Only seven of his cases died, five of whom were moribund when he first saw them.

Dr. G. Meyer (*Jahr. f. Kinderheilk.*, viii., 4) is strongly in favour of the treatment of diphtheria with ice. He finds that by this mode of treatment the fever soon diminishes and the diphtheritic membrane becomes detached and expelled. In only exceptional cases has he found the disease go on to the larynx under this mode of treatment, and in but one case was he obliged to have recourse to cool baths in order to reduce the temperature.

Dr. von Hüttenbrenner, in the *Jahrbuch für Kinderheilk*, condemns catheterisation of the larynx in croupous and diphtheritic affections. He finds that every time Weinlechner's tube is introduced into the windpipe the child is likely to be asphyxiated. Moreover, the mucous membrane of the mouth is liable to be wounded, and a number of skilled assistants are absolutely required. The operation is never of more than temporary use, and therefore tracheotomy is to be preferred. Dr. von Hüttenbrenner does not deny that the operation may be useful in other diseases.

Letzerich maintains (*Virchow's Archiv.*) that local diphtheria is a contagious disease of mucous membranes, the contagious principle being a fungus which appears and multiplies in the exudation, and in cases in which no exudation occurs even in the tissue of the mucous membrane itself. These fungi are disseminated and multiplied in the body, causing a general infection ; hence general diphtheria. The alterations which these fungi undergo occur first of all in the local morbid product, but afterwards affect parenchymatous organs, such as the kidney, spleen, liver, and even heart. Variable as these alterations appear, they all arise in the same principle. First of all are mentioned troubles of nutrition of tissues, due to embola formed by the fungi. From this there results an insufficiency in the tissues of the nutrient fluid, which can no longer circulate freely. In these conditions there is produced an incredible multiplication of these inferior organisms, most of all of micrococci. With this coincides destruction of the cellular elements. In this way disappear the cells of the kidney, liver, or spleen, and even the contractile elements of the muscle of the heart. Serious functional troubles necessarily follow, even though the tissues of these organs are only partially destroyed. This destruction of tissue is most intense at those parts where in the earlier stage the fungi had produced mechanical obstacles to the circulation.

TRANSFUSION OF LAMB'S BLOOD.

Drs. Holz, Proegler, and Wild (*Chicago Med. Examiner*) have operated five times for phthisis, three times for chronic anæmia, and once for hæmorrhage, with this result: that the operation was a failure in six cases, it caused the death of one patient, and two patients only were permanently benefited. All the patients experienced an improvement of their feeling and appetite, for the four to six weeks following the transfusion. This temporary benefit, together with the good result obtained in the case of hæmorrhage, might speak in favour of performing the operation in cases of profuse loss of blood. Here an instantaneous supply of blood will remove the immediate danger, and allow the body to reproduce its own blood by the time the transfused lamb's blood is exhausted. But will a lamb, or any other suitable animal, be at our disposal, just when we want it in such cases of emergency? Shall we not find it easier in such cases to get a few ounces of human blood, and to perform the indirect transfusion?

Prof. Landois, of Greifswald (*Am. Jour. Med. Sci.*, Oct., 1874), transfusing one animal with the blood of a different species (*e. g.*, rabbits with the blood of sheep), found that the serum of the blood of one animal dissolved the blood corpuscles of other animals; portions of the blood taken at different intervals after transfusion, showed the corpuscles in all stages of dissolution; the hæmoglobin of the destroyed cells was disposed of principally by the kidneys. And this accounts for the so-called "bloody" urine discharged after transfusion.

Prof. Ponfick, of Rostock (*Berl. Klinische Wochenschrift*, 1874, No. 28), examined the blood of a woman who died twenty minutes after the transfusion of lamb's blood. He found her blood full of small yellowish elements, the largest of which were two-thirds the size of human blood-cells, and then there were smaller ones of all grades down to the finest granules. The shape, colour, and chemical reaction characterised these bodies as blood-cells on a reduced scale; besides these, there was the regular number of normal human blood corpuscles, which were larger by one-third than the lamb's blood-cells. Débris of red corpuscles were found enclosed in the white cells.

Dr. Oscar Hasse, of Nordhausen, published an account of fifteen cases of direct transfusion of lamb's blood ("Die Lammblut Transfusion beim Menschen," von Dr. O. Hasse, Leipzig, 1874). Thus was revived an operation that failed 200 years ago, and, as we see, is failing again. He transfused seven times for phthisis, with five good results and two failures; four times successfully for chronic anæmia, and once for severe hæmorrhage with placenta prævia; once from cachexia from caries with temporary improvement of the patient; once for carcinoma without benefit, and once in a case of paralysis agitans, which died five hours after the operation, under the symptoms of cerebral apoplexy.

Summing up his results, Dr. Hasse says: "As to the greatest gain, I would like to call the attention to the most material aid which we have found the direct transfusion of lamb's blood to give us against phthisis. For just in these cases the success was simply wonderful; the general health of these patients was soon perfectly satisfactory, and the local disease continued to improve steadily, as shown by auscultation."

A HEALTHY YEAR.

It appears from the address of the President of the American Public Health Association that the present has been an exceptionally healthy year. This is shown by the reports now coming in of the various countries of the civilised world. Not only has there not been a movement of the great epidemics, but the general death-rate has been much less than during the preceding year.—*Toronto Sanitary Journal and Public Health.*

ABOUT BOOKS.

Therapeutic Means for the Relief of Pain. Being the Prize Essay for which the Medical Society of London awarded the Fothergillian Gold Medal in 1874. By John Kent Spender, M.D., Lond., Associate of King's College, London; Surgeon to the Mineral Water Hospital, Bath. London: Macmillan and Co. 1874.

We approach this work with the interest of one who had personally exhausted the various means employed to relieve pain, but remained a victim to its tyranny. We hoped to find some method we had forgotten, or some hint as to the employment of some remedy, or perhaps even some new plan of meeting the torments from which humanity suffers. If we have been disappointed in this, after a careful perusal of Dr. Spender's essay, we are none the less inclined to commend it as a well-written and thoroughly practical work on the subject of which it treats. To it was awarded the Fothergillian Gold Medal for 1874, and it has therefore received the emphatic approval of the adjudicators appointed by the Medical Society of London. We know of no other work which contains so full and judicious an account of our resources for the relief of pain, and we can commend it as evidently founded on a very considerable experience.

After an introduction on the nature of pain, and a sketch of the principal anatomical seats of pain, the author passes at once to his subject. First of all, he takes up those medicines intended to relieve pain which we administer by the digestive canal, and foremost of all opium, the great soporific which has played so important a part in abating the anguish of disease, and even in moulding the history of our race. The various uses of opium are carefully described, and in speaking of its use in inflammation we note that the author employed it long before the introduction of atropia in those cases in which the latter drug is now in such constant use. Thirty-five pages are devoted to opium, and eight more to morphia, these being but two out of forty-five remedies enumerated in this section. It is therefore impossible for us to follow the author through these various remedies, but we can advise the reader to do so for himself. We quite agree with the author that chloral hydrate is rather to be employed to procure sleep rather than to relieve pain, so that it is almost useless where pain prevents sleep.

Dr. Spender does not mention its use in conjunction with morphia. With the latter, especially hypodermically, we may often abolish pain for a time, the patient remaining, however, sleepless. In such cases a moderate dose of chloral after the injection has taken effect on the pain will confer the additional benefit of sleep.

We pass over the other modes of introducing our remedies into the system, including inhalation, which, in the case of anæsthetics enables us for the time to absolutely annihilate pain, and this brings us to the subject of the skin as a medium for medication. We observe that our author retains considerable confidence in the ordinary run of local applications, and we are aware that other therapeutists also have faith in them. For ourselves, we confess that frequent failure has reinforced our scepticism, and we rejoice that Dr. Alexander Wood's syringe has swept away "an army of leeches, a flood of fomentations, and a whole dispensatory of doubtful and disagreeable drugs." It is to the hypodermic method that we look for new triumphs in the immediate future, and we are almost surprised that Dr. Spender did not devote more space to this, though we are very glad that he adds his authority as to its immense value to that of others who are still more enthusiastic advocates of its extended use. We were rather surprised to find the author speaking of some patients as unable to endure the "short, sharp pang" of the needle. It can almost always be introduced without pain, if the needle be sharp, the operation carefully done, and the locality well chosen.

We confess to disappointment in the half-dozen pages devoted to electricity as a remedy for pain, and we hope the author will give further attention to this subject. The work closes with some remarks on hygiene and morals, a subject which is capable of being amplified to any extent; and we are glad to find the author speaking "with reverence and thanksgiving concerning the Christian religion—its consolations and its promises." All whose business is by the sick-bed can testify to the power religion gives to triumph over pain, and even death.

Archives of Electrology and Neurology: a Journal of Electro-Therapeutics and Nervous Diseases. Edited by George M. Beard, A.M., M.D., &c., &c. Vol. I., Nos. 1 and 2. New York: T. L. Clacker. London: H. K. Lewis. 1874.

We have before us the two first numbers of this important half-yearly journal, which cannot fail to promote Electro-Therapeutics, and is under the editorship of the veteran American electrologist, Dr. G. M. Beard, who himself contributes several very important papers: one of these is on "A New Method of Treating Malignant Tumours by Electrolysing the Base," and has already been noticed in The Doctor. Another, in the last number, is on "Chronic Alcoholism." He has also commenced a series of letters on "The Elements of Electro-Therapeutics," addressed to inquiring practitioners. Dr. Munson writes on "The Effect of Lightning-stroke on the Nervous System;" Dr. Lant, on "The Treatment of Vomiting by Electricity;" and there are several other equally interesting papers. There are also departments for reviews, gleanings from foreign journals, and editorial notes. The last are vigorous and to the point. We regret to find the Editor go so far as to maintain what he calls "The Duty of Vivisection!" We could understand the expression if applied to men who have proved their capacity for original research, and are well acquainted with the wide domain of biology; but we regard as monstrous his proposal that "no medical student shall receive his diploma until he has gone through a course of vivisection" (!) We are quite certain that such a proposal as this will never receive the sanction of the profession; still less likely is it that any Legislature should adopt it.

We have also received a pamphlet "On the Teaching of Materia Medica and Therapeutics," by W. H. Griffiths, Ph.D., L.R.C.P., L.R.C.S. Edin.; Librarian to the Royal College of Surgeons in Ireland; Honorary Member of the Ontario College of Pharmacy, &c. Dr. Handsel Griffiths says that in the whole range of subjects which the student of medicine is expected to "make up" during his curriculum, probably not one is so imperfectly taught as theratics and the collateral subjects materia medica and pharmacy, and the art of prescription. He says that the time allotted to these subjects is very inadequate, and that three lectures a week, each of an hour's duration, during the summer session of three months, are quite insufficient to convey a sufficient knowledge of the above-mentioned subjects. Dr. Griffiths thinks that materia medica might be taught during the second winter session, after the elements of chemistry and botany have been mastered by the student, and that the study of materia medica proper should precede that of pharmacy, therapeutics, and the physiological action of drugs, and the art of prescription. All our readers will, we think, agree with Dr. Griffiths when he says these subjects are at present very inefficiently taught, as a rule, especially the art of writing prescriptions. As to the latter, it is sufficient to ask any third or fourth year's student to indite a prescription. In most cases the result will justify Dr. Griffiths' remarks. Dr. Griffiths, in conclusion, says he would earnestly bespeak for therapeutics and its allied subjects a more prominent place in the system of medical education. He says:—

> "Of what avail is a knowledge of diseased action? How will the ability to pronounce a refined and accurate diagnosis profit us if we neglect to equip ourselves with the means which an all-wise Providence has placed within our reach of practising 'the *healing* art?'"

We commend his pamphlet to the attention of our readers.

SPECIAL DEPARTMENT.

QUARTERLY REPORT ON DERMATOLOGY.

By H. S. Purdon, M.D., L.R.C.P.,

Physician to the General and Skin Hospitals, Belfast, &c.

Since our last quarterly report the *Archives of Dermatology*, a quarterly journal devoted to skin and venereal diseases, has made its appearance. The editor is Dr. Duncan Bulkley, of New York, whose contributions to dermatology have frequently been noticed in these reports. We wish the *Archives* every success, and have formed a favourable opinion of the undertaking. Not the least interesting feature in the journal is the publication of the proceedings of the New York Dermatological Society; whilst amongst the original communications we may specially notice that of Dr. Smith on Rötheln, or German Measles, and Dr. Taylor on Lichen Planus, in which paper due justice is given to the labours of English observers, especially Erasmus Wilson.

ERYSIPELAS; TREATMENT BY THE TAR METHOD.

The tar treatment has been introduced at the Bellevue Hospital, New York, on the assumption that erysipelas is communicated by means of germs, and an antiseptic like tar would be the most reliable method of stopping its propagation. The manner of using it is to keep the whole of the erysipelatous portions of the skin covered with tar, and in this manner render inert the emanations. The results so far obtained tend to prove that it is deserving of a more extended use.

ON THE TREATMENT OF VARICOSE ULCERS BY HYPOCHLORITES.

In the second number of Gubler's new *Journal de Thérapeutique*, M. Panas has a most interesting paper on the above subject; he draws attention to the researches of Lisfranc and others in the same direction. He claims for "l'eau chlorurée" (hypochlorite of lime) a remarkable power of rapidly modifying the greyish surface and fœtid sanies of varicose ulcers. This property he explains very plausibly, by assuming that oxygen in the nascent state is developed when the hypochlorite (ClO CaO) is applied to organic matters, chloride of lime being formed at the same time. He very ingeniously compares this oxidizing action of "l'eau chlorurée" with the results obtained by the application of pure oxygen to gangrenous parts, as practised by MM. Langer and Démarquay.

CAUSE OF DEATH AFTER VARNISHING ANIMALS.

The cause of death after the skin of animals has been covered with varnish has been the subject of much discussion. It has been ascribed to asphyxia, reduction of temperature, retention of perspiration, &c. Dr. Feinberg has repeated the experiments, and he considers that the symptoms are due to a general dilatation of the entire vessels of the body. He finds in all parts dilatation, over-filling, and often rupture of the blood-vessels. In the spinal cord there was congestion, extravasation of blood, and hyperplastic formation of the neuroglia around the extravasations. There were constantly extravasations in the mucous membrane of the stomach. There were often extravasations in the liver, &c. Such an universal relaxation of the blood-vessels throughout the body must be due to paralysis of the vaso-motor centres. This would produce immense reduction of the intravascular pressure, and sinking of the action of the heart with stasis in the capillaries. It is well known that the vaso-motor centres are subject to reflex action by irritation of sensory nerves; and it is here supposed that the intense irritation of the cutaneous nerves by the varnishing may be sufficient to paralyse these centres. This would account for the phenomena. The nervous symptoms, such as hyperæsthesia, partial anæsthesia, reflex tetanic convulsions, partial paralysis, &c., are sufficiently accounted for by the congestion of the grey matter of the cord. Then the very marked reduction of temperature may be due to the increased radiation of heat in the hyperæmic cutaneous vessels. It is to be noted that the author's microscopic specimens were looked over, and his facts confirmed, by the distinguished histologist Frey.—*American Journal of Medical Sciences.*

NOTE ON ECZEMA OF THE SCROTUM.

Eczema of the scrotum and neighbouring regions is frequently met with in practice, and of all the local varieties, it is about the most obstinate as regards treatment, which may be accounted for when we take into consideration the loose nature of the integument of the scrotum, as also its excessive vascularity, especially of the penis.

The disease generally commences as an erythema, accompanied by tension, redness, and glazed appearance of the affected parts. Tingling and actual pain are complained of more than itching. After a short time papules appear, which generally become pustular at their apices, thus giving rise to a pustular eczema. Through the centre of each pustule a hair runs, proving the vascular and selective nature of the disease. Strange to say, the worst cases of eczema of the scrotum and groin I have seen were in the persons of "tea tasters," in whom I think the disease was due to assimilative debility. As regards the treatment. The disease is generally chronic, and when this stage is reached is not affected by internal medicines. Arsenic, mercury, &c., &c., are useless. Tonics and aperients, especially the latter, do good. Locally, however, the disease must be attacked, as follows:—If there be much discharge, which often has a peculiar odour, and of a mucoid appearance, as met with in erythema intretrigo, dusting powders, such as one composed of—carbolic acid ʒs., alum ℥ss., starch ʒxij., chalk ℥v., oil of lemon ʒij., may be sprinkled over the affected part, and to prevent its caking, washed off with yolk of egg and warm water during the day, and then reapplied. The plain zinc ointment is the best dressing for the scrotum, and when itching and chronicity are present the affected part may be sponged with olei Rusci, or oil of Cade, then smeared with zinc ointment again. In some cases painting with a very weak solution of the nitrate of silver dissolved in sweet spirits of nitre has been of service. If there be much swelling of the penis, keep the organ up towards the abdomen, and wear a suspensory bandage; if the scrotum is involved, smearing with zinc ointment in the first instance, to protect the inflamed skin, and then applying spirit lotion on strips of lint, rapidly reduces the swelling and abnormal heat. As a rule, however, tarry preparations, citrine ointment, and white precipitate ointment make the disease worse. In all cases a suspensory bandage is useful. Soap in the acute stage is injurious. After a time, however, it may be used.

HERPES TONSURANS.

M. Horand makes the following communication in regard to herpes tonsurans. The researches of the last few years have shown in an evident manner that animals, such as the rat, the cat, and the dog are susceptible of contracting favus. These same researches show the manner of transmission of favus from the animal to man.

It has for a long time been known that herpes tonsurans is common in the ox and the horse, and many facts have been cited to show that the disease may be transmitted from these animals to man. It has, indeed, been supposed that herpes tonsurans might exist in the cat and the dog, and M. Daniel Mollière has cited before the Society of Medical Sciences a case of herpes tonsurans observed by M. Galleton in the cat. Nevertheless no experiments analogous to those made in regard to favus had as yet been instituted until the idea suggested itself to me of throwing light on the subject of herpes tonsurans in animals by a series of experiments on the rat, the cat, and the dog.

The result of these experiments were consigned to a thesis, lately sustained by M. Vincent at Paris, the conclusions of which I will recall here:—

1. The rat is refractory to herpes tonsurans, although favus developes on him with the greatest facility.
2. The cat is susceptible to both herpes tonsurans and favus.
3. The dog can contract not only favus, but also more especially herpes tonsurans.

Since the publication of these first experiments I have renewed them, and have arrived at the same conclusions. To-day I desire to submit to the examination of the Society of Medical Sciences one of the animals in which the inoculation was followed by complete success. It is a young cat, born the 27th of March, 1874, and on which I practised a double inoculation of herpes tonsurans the 1st of April, in the following manner:—After having cut the hair as short as possible over an area as large as a franc-piece upon the head, I scraped this surface with a razor charged with tricophytic matter previously moistened with a little water. Another surface of the same size I epilated and rubbed it with trycophytic matter, also moistened with a little water, and allowed it to remain in contact. On the 6th of April the inoculation seemed positive; on the second spot are seen little scales which show on microscopic examination numerous spores of trycophyton. It was not, however, until the 23rd of April that the inoculated spots presented appearances which left no room for doubt. These spots have extended, are covered by brown crusts adherent to the hairs and resembling the crusts of impetigo granulata. Microscopic examination reveals numerous spores and hairs irregularly broken, with diminution of fibres by interposition of spores, but no mycelium. Since that time the first spot has healed of itself, while the second has progressed and taken on the characteristics of herpes tonsurans as seen in the child.

BROMINE ACNE.

Dr. White, in his last report on Dermatology in the *Boston Medical and Surgical Journal*, gives the following translation:—

> Dr. Theodore Veiel, in Cannstadt, having had the opportunity of observing, in the asylum for epileptics at Stetten a great many patients who were taking large doses of bromide of potash, has communicated a very interesting report upon the action of this drug upon the skin. The amount required to produce the acne depends wholly upon individuality. In many cases it appears quickly, with moderate doses, while in others it is wanting, even after the largest doses. It occurs alike in both sexes, and with all constitutions, as often in the robust and full-blooded as in weak, anæmic, and scrofulous persons. No opportunity was afforded of determining the age most liable to it, as only young persons were the subjects of observation. The condition of the skin seems to exercise a material influence upon the disposition to this acne, as it is especially apt to occur when the skin is thickened and greasy with sebum. Comedones and acne of prior existence increase in intensity; and the disappearance of acne vulgaris, after the use of the bromide, as stated by Fox and Cholmeley, was never observed. An acute outbreak, with febrile symptoms, was never noticed, the eruption always appearing very gradually, and exhibiting the most various stages of development simultaneously upon the same individual.
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> In respect to seat, it differs from ordinary acne, inasmuch as it affects not only the face, neck, shoulders, and breast, but also, as a rule, the scalp, the eyebrows, the hairy portions of the legs, and often the whole surface of the body. It especially prefers parts abundanly supplied with hair, but is never, like sycosis, exclusively limited to one hair district. Its localisation, in fact, is identical with the acne produced by tar and iodine. In colour the efflorescence offers nothing characteristic, and its development, duration, and retrogression are the same as in common acne. Not a trace of bromine could be detected in the pus collected, although it could be readily recognised in the urine at the time. (It is not stated that the sweat-glands did not contain bromine). With the increase of the dose, the eruption increases in intensity, and diminishes as the dose is lessened. From acne vulgaris it may be distinguished by its situation upon parts abundantly supplied with hair by preference, so that a majority of the pustules appear to be perforated by a hair, and that it often occurs without any concomitant formation of comedones. Inasmuch as these latter peculiarities are common also to tar- and iodine-acne, it can only be distinguished from the latter by the entirely characteristic fœtor of the mouth, which affects all patients exhibiting bromine-acne, and by urinary analysis, as the other symptoms of bromism do not appear until after the acne.
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> Several other forms of cutaneous affections were observed in addition to acne in the asylum. Erythema nodosum, exclusively of the lower extremities, continued in some cases as long as the bromide was given, but disappeared as soon as its administration ceased. It was never accompanied by fever.
>
> A diffuse and very painful erythema, accompanied by fever, and likewise confined to the lower extremities, was more frequently noticed.
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> Another affection was observed upon the lower legs of two boys. Wheal-like elevations of considerable size appeared upon erythematous portions of skin, which were very sensitive, gradually assumed a wart-like appearance, and underwent ulceration. The ulcers thus formed had a bad look, were deep, and showed no inclination to recovery as long as the bromide was given, but healed at once as soon as this was omitted, and left a scar of a dirty yellow colour behind it.
>
> In another case a great number of warts appeared on many parts of the body, but in greatest numbers upon the face.

INDEPENDENT DEPARTMENT.

DRUNKENNESS AND INSANITY.

A REPORT by DR. CHARLES R. DRYSDALE, M.D.,

Senior Physician to the Metropolitan Free Hospital, and, Physician to the North London Consumption Hospital.

IT has been asserted that in some countries, and notably in this, more than half of the cases of insanity in lunatic asylums are caused by drinking.

In the United States, also, a vast amount of insanity is attributed to drink. At a recent meeting, for instance, of the Neurological Society of New York, Dr. G. Burr says that the desire for excessive indulgence in drink comes from an unnatural demand of the sensory apparatus, exciting to inconsistent and ruinous acts, and in this respect resembling the condition of the system exhibited in homicidal and suicidal impulses, erotomania, kleptomania, pyromania, &c., which, since the days of Pinel, has been regarded by all intelligent observers as one of unsoundness and irresponsibility.

By inebriety Dr. G. Burr means *the desire to get drunk*. That there exists in the human constitution a natural desire for something to stimulate, or to excite to lively and pleasing sensations, he thinks must be acknowledged. The Egyptians, the Greeks, and the Romans used wines at their feasts, and Moses directed the use of wine in religious observances. Herodotus, Xenophon, and Ovid, and the elder Pliny speak of drunkenness among the people of the old world. He, therefore, divides the propensity to drink, or love of stimulants, into two varieties—a normal, healthy, moderate desire, and an increased, augmented, inordinate demand.

The desire for stimulants, says Dr. Burr, may almost be regarded as a special sense: it is not the demand of the system for food, or the sensation of hunger or thirst; it is something superadded peculiar to the human organism.

As to the increased or inordinate desire for stimulants, instances of morbid appetite of other kinds are met with, as in the glutton. The taste which impels to the inveterate use of tobacco, especially the practice of chewing, can hardly be said to be other than a morbid one. So with erotomania. What plague or epidemic, however, is there so destructive and fatal in its effect on the race as the love of drink? Seventy years ago Dr. Rush observed that the habit of drinking was a disease of the will, which he inferred from persons who are inordinately devoted to the use of ardent spirits being irreclaimable by all the considerations which domestic obligation, friendship, reputation, property, and sometimes even by those which religion and the love of life can suggest. He believes that most persons fall into habits of inebriety involuntarily; they come within the influences which promote them thoughtlessly, and perhaps unknowingly, as one comes in contact with the infection of typhus, &c.

The insatiate desire, or rather morbid impulse, to drink, has given rise to many extraordinary cases of utter abandonment to its influence. The case recorded by Dr. Rush is one. He refers to a habitual drunkard in Philadelphia, who, when urged by his friends to leave off drinking, replied, "Were a keg of rum in one corner of a room, and were a cannon constantly discharging balls between me and it, I could not refrain from passing before it to get the rum."

Take the population of the United States, says Dr. G. Burr, and without stopping to consult statistics, he thinks we may assert that among the inhabitants the ratio of the insane is very large, perhaps larger than in any other nation. "Intemperance is the fearful penalty our people pay for their vast enterprises, large accessions, commercial activity, and political success.

Dr. Rush first proposed the plan of treating inebriates in public institutions seventy years ago, and in numerous institutions in New York and elsewhere the care of dipsomaniacs has come into vogue since that time.

Dr. Willard Parker, in the debate which followed the reading of Dr. Burr of Binghampton's paper, observed that all people and nations, as well as individuals, male and female, like excitement. Some seek it in poetry, others in music, others in tobacco, and a large proportion of the race prefer excitement from alcohol and opium, which are in many respects alike. From experiments on rabbits, it was found that ten days after giving them alcohol it could be found in the brain and spinal cord. Does alcohol, when ingested into the body, become assimilated and produce force? Why is the temperature lowered when alcohol is taken? Why do all persons in high latitudes find that they cannot take alcohol when the cold is intense? How is it that persons who have to do hard work so often break down when they attempt it on spirits and beer? And how is it that insurance companies find that the average life of teetotallers is about 64, whilst that of drunkards and moderate drinkers is only 35 years and 6 months? Fifty per cent. of the idiots in asylums and idiotic schools have drunken parents.

These questions of Dr. Willard Parker are indeed puzzlers, and I cannot see how our friends who are so enthusiastic about beer, and even tobacco, can give a satisfactory reply to them. Alcohol is like ether and chloroform, or opium, a most dangerous substance to partake of constantly.

Another gentleman, Dr. Edwards, of London, mentioned briefly that Gairdner's milk treatment of typhoid fever was found much more successful than Todd's stimulating plan.

Dr. Lente, of New York, asserted that alcohol prevents tissue metamorphosis, and thus may produce a lower temperature. As usual, this kind of argument is very hypothetical.

Dr. Hammond, of New York, whose paper was reported in The Doctor, thought that inebriates, being to all intents and purposes lunatics, ought to be treated as such. The idea of trusting to the honour of an inebriate or a lunatic is absurd.

Dr. Dagonet (*Annales Medico-Legales*, Jan., 1874) speaks of the hallucinations of the senses experienced by alcoholic drinkers. The hallucinations of sense, he says, like those of hearing, are almost always accompanied by moral depression, under the influence of which the patient remains constantly plunged in an anxiety more or less profound. It may be confidently asserted that it is not the sensorial delirium, nor the nightmare that comes every instant to trouble sleep, which causes the state of fear; but it is rather the moral disposition itself that generates these singular and painful delusions; it almost always precedes them. In place of figures of animals, so generally present to the patient, he sometimes sees the spectres of relatives or friends long since dead; it may be a father, a mother, or perhaps a female acquaintance, whose cold or bony hand applied to his shoulder comes to redouble his terrors.

Sometimes there is hyperæsthesia of the sense of hearing, but occasionally an opposite state, that of deafness, both of them passing away soon after the system gets clear of the alcohol.

General morbid sensations are also referred to the two orders of hyperæsthesia and anæsthesia. As illustrative of the former, Dr. Dagonet mentions cramps, shocks through the system, &c. Bouchardat, in 1869, described a hyperæsthetic condition which presented itself in two principal forms—a superficial one, in which the skin is so sensitive that the patient either cries at the least touch, and one deeper-seated, in the muscles, or bones.

Epilepsy and epileptiform attacks, when of alcoholic origin, do not differ in their external manifestations from those due to other causes, though, in a general way, it is true that the former are more severe, and occur more constantly in a paroxysmal form than the latter, that is to say, in repeated attacks at brief intervals. Their effect upon the mental faculties is said to be more profound than that of ordinary epilepsy.

The prognosis of epilepsy due directly to alcohol is generally favourable; for so long as the patient, at least in the early stage, abstains from the use of alcoholic liquors, the fits rarely occur. Absinthe and the white wine of Paris would seem to produce convulsive seizures more readily than the liquors used in this country. In illustration of the manner in which, when alcoholic, they may recur from moral causes alone, Dr. Dagonet relates a case where a patient, who had been subject to severe convulsive fits after absinthe, but had apparently been cured for two years, was seized with them again in great intensity when much alarmed by the bombardment of the quarter in which he resided during the siege of Paris.

It is shown that after these seizures attacks of mania of short duration are apt to occur, in which the individual may commit a serious criminal act, and have no recollection of it on his recovery. This, it need scarcely be said, is a feature in epilepsy generally, and is not particularly common in alcoholic epilepsy.

Ephemeral mania, independent of epilepsy, is an occasional result of alcoholic indulgence. Dr. Lasegue has already remarked that in chronic alcoholism paroxysms of acute alcoholism occasionally supervene in people who, during some time, have committed no excess; slight incidents cause an explosion of it: that is what we find, for instance, in prisoners confined for a considerable time, or in persons who have undergone treatment for longer or shorter periods in hospital.

The whole question of the dietetic and long-continued medicinal use of alcoholic liquors is so intimately involved with custom, with prejudice, with appetite, and with moral fanaticism, and a really fair discussion calls out such bigotry and bitterness on both sides, that a truly scientific work on the subject seems almost an impossibility.

Dr. James Edmunds has published in New York a little work on the "Medical Use of Alcohol and Stimulants for Women," in which he gives the following very good definition: A food is that which, being innocent in relation to the tissues of the body, is a digestible or absorbable substance, which can be oxidised in the body and decomposed in such a way as to give up to the body the forces it contains. He then goes on to show by various pathological facts that alcohol is not innocent with respect to the tissues. Referring to the statistics of life insurance companies in England, he states that the mortality among total abstainers is much less than among moderate drinkers, and also compares the ordinary average mortality of thirteen to sixteen per thousand of the average working classes and agricultural labourers with that of thirty in a thousand among those engaged in the sale and manufacture of intoxicating liquors, and who are assumed, as also lately by Dr. Dickenson, to be among their own best customers.

It is also perfectly true, as Dr. Edmunds urges, that alcohol is far from being an economical food, if it be a food at all—that is, supposing the system to be equally ready to use up either of these substances the same sum of money will buy much more in the form of starch or sugar than in the form of alcohol.

For the perfectly healthy man any dose, even the very smallest, of alcohol is a narcotic. It is not of the slightest service to the lower animals. Alcohol, then, should be shunned by the healthy; and milk is a far better diet than beer or porter for nursing women.

We heartily agree with the following sentence from the pen of Dr. Edmunds: "I do not believe (he says) that there is any virtue in being a total abstainer. If you do not see clearly that physiologically the use of alcoholic liquors is a mistake, your total abstinence and self-sacrifice for somebody-else's benefit are not worth a rush; and as far as I can see, total abstinence upon that platform has done nothing but retard the movement. A man's duty is to take these things if they will help him to do his duty to his family, himself, and to the society in which he moves."

The amount of gout and diseases of the liver and brain seen in London hospitals, and caused by beer-drinking, is very large indeed; and the destruction of the sight caused by chronic tippling is quite remarkable in its frequency, if we may judge by cases seen at the Royal Ophthalmic Hospital in Moorfields. The learned physician Haller says with perfect truth, "Experience teaches that water-drinkers live longer, have a better appetite, and keep their sight longer than those who drink beer." The lesson taught by a short sojourn at Vichy, in France, as to the baneful effects of a life of wine-drinking will be forgotten with difficulty by the physician: gout, and that of the most distressng character, is there most plentiful.

Fortunately for the populations of ancient Greece and Rome, their alcoholic drinks were weak wines, and the distillation of spirits was quite unknown in those days. At present the diseases caused by spirit-drinking are among the most common, the most hopeless, and the most loathsome of all diseases flesh is heir to, because these diseases are always accompanied by such a loss of moral tone in the unfortunate drunkard as to make the case infinitely less interesting to the practitioner. To call a substance a food which is the most frequent cause of insanity, which produces paralysis, delirium tremens, dropsy, epilepsy, melancholy, brutality, and filthiness, which incites to such hosts of crime, and to so much cruelty to women and helpless children, which so often causes suicide, apoplexy, heart disease, hardening of the brain and spinal cord, and blindness—to call this *a food* is to make language a way of deceiving mankind.

The debate on alcohol is commencing, and by all means let it go on until we understand whether it is a friend or a foe.

IN THE LABORATORY.

CHLOROFORM.

MR. J. C. BARNES, F.C.S., in the *Pharmaceutical Journal* for December, states that chloroform prevents not only alcoholic, but also lactic fermentation, and suggests that milk may thus be conveniently preserved. When the milk is required for use the chloroform may be driven off by boiling. He thinks it probable that not only milk, but also many other substances, such as solutions of acetate and citrate of ammonia, citric acid, &c., may thus be preserved by the addition of chloroform.

UREA IN THE BODY.

DR. KNIERIEM (*Zeitschrift für Biologie*) gives the reults of a series of observations and investigations made by him to determine the origin of urea in the body. They are as follows;—

1. Ammonia is excreted by the urine under normal conditions, though in what precise condition is unknown. Its quantity is slightly increased when ammonia is taken internally. By far the largest part leaves the economy as urea, and ammonia therefore, like leucin, is to be regarded as an antecedent of urea in the economy.

2. Asparaginic acid and asparagin also undergo metamorphosis into urea in the body. They may with most certainty be regarded as antecedents of urea when they appear amongst the products of the artificial digestion of the proteids, or when they are formed in any other way in the economy.

3. Sal ammoniac is retained longer in the organism than asparaginic acid or its amid, and this especially holds good in regard to the chlorine.

4. No conclusions can be drawn in regard to the behaviour of any substance in the body from its chemical composition. A special series of experiments is required to determine this for each substance.

COLLOID ANIMAL MATTER.

In a lecture on the "Pathology of Pectous Changes," Dr. B. W. Richardson lately expressed the opinion that all the variations of colloidal matter in the body known under the different names of fibrin, gelatin, albumen, globulin, casein, and chondrin, are but modifications of one form, induced by combinations between it and water, through the medium of inorganic bases and salines having an affinity for water, which fix it in combination. The purest colloid, which by perfect dialysis is most completely freed from these intermediate substances, is the most easily converted from the soluble into the insoluble pectous form. Fibrin he considers to be the nearest approach to the pure form of colloidal matter in the human body.

SYRUP OF FERROUS PHOSPHATE.

In the *Pharmaceutical Journal* Mr. H. W. Jones proposes to prepare this substance by adding syrup to phosphate of iron, prepared by the action of phosphoric acid on metallic iron. He says that by this process a syrup is obtained which keeps remarkably well, is quite free from the usual impurities, contains the phosphate of iron in an unoxidised condition, and which requires less free acid to keep it in solution. This process also requires much less attention than that of the British Pharmacopœia. Mr. Jones says :—

"The British Pharmacopœia directs syrup of phosphate of iron to be made from precipitated phosphate, and, so far as I am aware, all published formulæ for the syrup direct precipitated ferrous phosphate to be used. Since phosphate of iron precipitated from mixed solutions of sulphate of iron and phosphate of soda is extremely difficult to wash and very liable to oxidation, as all know who have manipulated it, it occurred to me to prepare the phosphate direct from metallic iron by means of phosphoric acid."

NOTES, NEWS, AND GOSSIP.

LARYNGOSCOPY EXTRAORDINARY.

We though tthat all the uses of the laryngoscope had been already pointed out ; but it was reserved for Dr. Labordette to discover a new one. In a communication on the contraction of the masseter as a sign of life, he says that the laryngeal speculum, after having triumphed over the contraction of the masseter, is of service in recalling life ; the contraction ceases on its application. In every case he found that, on the restoration to life, the jaw closed as soon as the instrument was withdrawn. If, on the contrary, the introduction is maintained, the elastic force, which Voisin says is due to trismus, becomes neutralised, and the obstacle to the introduction of air being thus overcome, the patient inspires and lives. If the speculum be introduced into the mouth of a cadaver, the fact becomes manifest, that though the instrument is inserted very deeply, it does not become fixed. It may be withdrawn and the mouth will remain open, corresponding with the absence of contraction in the masseters. In this way the double advantage is obtained of having a proof of death if the mouth remains open, and a means of recalling the life of the patient if the mouth closes. Any one can thus assure himself whether death has really taken place.

A NEW Italian journal, entitled *Rivista Sperimentale di Freniatria e di Medicina Legale in rapporto con l' Antropologia e le Scienze Giuridiche e Sociali*, has appeared, under the direction of Prof. Cav. Carlo Livi.

PROFESSOR THIERRY, of Brussels, having lately been promoted to the grade of officer of the Order of Leopold, received quite an ovation from the students on his first subsequent visit to the Hospital.

A DEATH has already been recorded in France from the intra-venous injection of chloral, a method of producing anæsthesia of which we expressed our fears when it was first proposed.

ONE of the latest novelties in the way of charms for watch-chains and guards consists of a piece of lunar caustic tastefully mounted. It is supposed to combine the *utile* with the *dulce* to the wearer, who, immediately he or she has been bitten by a rabid animal, applies the handsomely mounted piece of caustic (perchance a souvenir), and brings the charm of poetry into common life whilst burning out the part bitten by a dog or cat.

We would suggest that the ornament in question would be a very suitable appendage to the watch-chain for students or practitioners engaged in dissection, or in making post-mortem examinations.

THE TALE OF A BAG.

It is common enough to hear of disputes about the invention of surgical instruments, and the ether controversy is an old story, but it has been left for two distinguished obstetricians of London to dispute over the "invention" of a bag. The future historian will be puzzled to decide who first conceived the brilliant idea of carrying his instruments in a bag, and calling it an "obstetric bag." When this important question is settled, we shall be glad to know who claims priority in the use of sponges.—*New York Medical and Surgical Journal.*

A PEEP INTO A PRIMA DONNA'S THROAT.

DR. FIEBER of Vienna, like the little boy that cut open his drum to see where the music came from, has been looking into the throat of Madame Pauline Lucca, and publishes the results of his scrutiny. The mechanical apparatus to which the melody is due appears in her case to be beautifully perfect, owing doubtless partly to natural endowment, and partly to the scientific training which she had in early youth. Examined under the laryngoscope, the larynx appears small and well-shaped, its parts being marvellously developed and perfect. The true strings are pure snow-white, and possess none of the bluish tinge common among women. Although shorter than usual among vocalists, they are stronger in proportion, and amply provided with muscle. When at rest they are partially screened by the false strings ; but Dr. Fieber, who watched Madame Lucca's throat through his instrument whilst she was singing, noticed that as soon as a tone was struck, they displayed themselves in their full breadth and strength. The aid given by a suitable form of mouth to the production of vocal music is a novel and interesting point brought out by Dr. Fieber. On being admitted to a view of the artist's mouth he was at once struck with the spaciousness and symmetry of its hollow, as well as with the vigour with which every tone raised the "sail" of the palate. He is of opinion that the natural conformation of her mouth accounts in a large measure for the wonderful power she possesses of raising and dropping her voice alternately. The sound-waves are naturally strengthened in a space so favourably shaped, while the muscles of the palate appear to have acquired exceptional strength and pliability by long practice. *Boston Journal of Chemistry.*

TOO GOOD TO BE TRUE.

M. PARAF has discovered a way of doing without rain, if necessary. He knew that the air is full of moisture, and he knew that chloride of calcium would attract and condense it, for cultural purposes. He has applied this chloride on sand-hills and road-beds, on grass, on all sorts of soils, successfully, and he has ascertained that it may be applied in such proportions as will produce the irrigation of land more cheaply and efficiently than by means of canals or other methods of securing artificial irrigation.—*Boston Journal of Chemistry.*

NOTICES.

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TO CORRESPONDENTS.

⁂ We beg to thank those gentlemen who have, during the past, kindly furnished us with abstracts of their lectures, communications to societies, contributions to journals or other productions, and to say that such abstracts will always receive attention.

⁂ Correspondents are requested to write legibly, and on one side of the paper only.

☞ Books for review, exchange journals, and literary communications to be addressed to the EDITOR of THE DOCTOR, at the Office, 20 King William Street, Strand, London, W.C.

ALPHA, Edinburgh.—Solutions of most alkaloids and their salts undergo change by keeping; hence it is desirable for hypodermic use that they should not be kept too long. The hypodermic solutions of morphia not only become brown by keeping and deposit some sediment, but a fungus is developed, and on this growth the morphia is precipitated. When the mouth of the bottle becomes encrusted with this and deposit takes place on its sides the solution should be rejected as unfit for hypodermic use.

THE DOCTOR.

LONDON, MARCH 1, 1875.

Multum in parvo.

THE DOCTORATE.

FOUR years ago, in two articles entitled respectively "Who is a Doctor?" and "What is a Doctor?" we put forth our views respecting the difference between University graduates in medicine and other practitioners. The solution we offered has been widely accepted. But for two or three months past an undignified squabble has raged in our weekly contemporaries as to the right to the prefix "Dr."

Just as there are lords by right and lords by courtesy, so it is argued the M.D. is a Dr. by right, whilst the M.B. is so by courtesy, a privilege which is also claimed by Licentiates of the Colleges of Physicians. These latter are admitted to be physicians, and therefore they argue they must be Drs.; but it seems there are not wanting many M.D.'s who are ready to dispute the point, and it is almost humiliating week after week to see pages of a medical journal given up to the dispute.

Still the fact that for months an angry correspondence has been carried on on the subject proves how much heart-burning exists in consequence of the great variety of qualifications to practise that have grown up in this country.

Everywhere else but one degree is recognised—every medical man is a Dr.; and foreigners fail to comprehend our complicated system.

In France a surgeon or a physician is equally M.D., and may be addressed indifferently as Doctor or Monsieur; a similar state of things exists in other Continental countries; while in America the only qualification known is M.D., and this is conferred by universities and colleges alike.

In an old country like ours, in which institutions have grown so slowly, it is hardly to be expected that such a change could be made as to place the profession in the same position as abroad; but it is to be observed that the public is profoundly indifferent to our distinctions of qualification, and calls every medical man Dr. The question is, how far this custom should be recognised by ourselves. For our own part, we are satisfied that it would be well to obliterate to a large extent the distinctions of qualification, and we are ready to address any professional brother as Dr. without inquiring whence he obtained his diploma. Of course the man who desires to sign himself M.D. must get the degree from a recognised university; but even then it is to be remembered that the universities are not all held in equal esteem, either by the public or the profession.

The only persons who really have any grievance to complain of are those who are willing, nay, even desirous to be admitted to an examination for M.D., and who have fulfilled a full curriculum.

Since the closure of the University of St. Andrews to non-residents such gentlemen have no means of gratifying their ambition, and it is a question whether it would not be well for that university or some other to throw open its examinations to non-residents, for it is quite certain that a curriculum at one of the London hospitals affords better opportunities of studying medicine than a similar term at some of the universities. Why should not the University of Durham admit London students to its examination as well as those of Newcastle-on-Tyne? This would satisfy all who are so anxious for the magic affix M.D. As for those who only want the simple prefix Dr., would it not be well for the conjoint boards, when established, to confer the right to its use? For those already in practice, we see no way out of the difficulty, except the liberal recognition of the Dr. by courtesy we have ventured to suggest.

It is only in the medical profession that any question as to degrees is of much interest. A practising barrister, even if he be LL.D., does not call himself Dr., but writes on the door of his chambers simply Mr. It seems almost a pity that doctors cannot emulate lawyers in their indifference to such distinctions. A great physician or a great surgeon in the one word comprehending both, and universally understood, a great doctor is not so by virtue of a diploma; while, on the other hand, no degree can create a great doctor.

CHRONICLE.

SIR W. JENNER ON "OUT-OF-HEALTHEDNESS."

In his presidential address at the Clinical Society, Sir Wm. Jenner having dwelt on the etiology of the acute specific diseases, alluded briefly to the condition of the individual which precedes the establishment, in many cases, of chronic organic disease. On this point he said: "We are apt to pay too little attention, to attribute too little importance to the general—to use a very barbarous expression—'out-of-healthedness' which is so common in previously healthy persons from overwork, from anxiety, from overfeeding, from overstimulation short of so-called intemperance, from want of food, from bad air, from deficiency of exercise, from deficiency of stimulus, to 'out-of-healthedness' in which the patient refuses to admit that he is ill, although he is a little, as he says, out of sorts, and only seeks advice because his friends notice that he does not look well and urge him to consult a physician. This condition cannot be studied in hospitals. Those only who are engaged in family practice can trace the origin, can watch the course, can estimate the effects of this condition in all its bearings. For myself, I have been long satisfied that a very large proportion of the subjects of organic diseases, tubercular, malignant, and degenerative, using those words in their widest sense, are mistaken when they attribute the symptoms of imperfect health, from which they have long suffered, to incipient local disease, and for not detecting which they too often blame their first medical attendant. The deteriorated general nutrition to which I have referred as mere 'out-of-healthedness' was the cause of their sense of want of perfect health; and, ultimately, this imperfect general nutrition of every part of the body culminated in the extreme malnutrition of that part or organ which natural constitution or accidental circumstance had rendered less able to resist organic change."

ATROPHY OF THE PLANTAR MUSCLES.

A case of atrophy of the plantar muscles lately came under the notice of Dr. F. H. Hamilton in his clinical service at the Bellevue Hospital, N. Y. Dr. Hamilton says (*Phil. M. Times*) that the man came to him complaining of rheumatism of the foot. When he took off his shoes Dr. H. observed that both his feet were flat. The ligaments which support the arches of the foot had given way. The man could not walk well. Dr. H. recommended galvanism and warmth.

A NEW SPLINT FOR FRACTURED PATELLAS.

In the *St. Louis M. and S. Journal* Dr. R. E. Beach writes recommending a new splint for fractured patellas. He says that having tried O'Reilly's ring, and found it ineffectual, the idea occurred to him if he could construct a splint composed of *two half-rings*, each one being made to grasp the fragment in its displaced position—use the lower as a fixed point, and, by the aid of small straps, connect the two segments and draw the superior fragment downward—that thus he might effect approximation. After some deliberation, he succeeded in constructing and applying a splint of this kind. The two half-rings were fixed by means of wires to a curved splint placed beneath the limb in the popliteal space. The above description will give an idea of the splint. Those who desire further details may refer to the paper of Dr. Beach (*St. Louis M. and S. J.*), which contains a full description of the splint in question, and is illustrated by two plates.

TYPHOID FEVER.

In the *Practitioner* for January Dr. George Johnson says that in the treatment of typhoid fever careful nursing and feeding are of primary importance, while, as a rule, no medicines of any kind are required, and when not required they are often worse than useless. Diarrhœa is a less frequent symptom than before this plan was adopted, and when it does occur it is far more tractable, while tympanitic distension of the abdomen is a rare event. The mischievous opiate enemata and the torturing turpentine stupes have disappeared together. He believes that one of the main reasons why we have less diarrhœa than formerly is, that we carefully abstain from the employment of irritating drugs of all kinds. As a rule, a fever patient at King's has the "yellow mixture," which is simply coloured water; and except an occasional dose of chloral to procure sleep, and a tonic during convalescence, no active medicines of any kind. These patients are fed mainly with milk, with the addition of beef-tea and two raw eggs in the twenty-four hours, and wine or brandy in quantities varying according to the urgency of the symptoms of exhaustion, especially in the advanced stages of the disease; but in many of the milder cases, and especially in the case of children, no alcoholic stimulants are required from the beginning to the end of the fever, and when not required they are of course, says Dr. J., best withheld. He gives no irritating drugs of any kind, and has no doubt that the comparative infrequency of severe and obstinate diarrhœa amongst his enteric fever patients during the last few years is partly attributable to the discontinuance of mineral acid treatment.

UTERINE DISPLACEMENTS DUE TO TIGHT LACING.

Dr. D. Wade, in the *Detroit Review*, has the following forcible remarks on this subject:—

"The most frequent cause of displacement of the uterus is force applied externally to the uterus. What force? *I say the artificial contraction of the waist.* Every one has heard old ladies say they rarely heard of female weakness when they were young, and the same ladies tell us that lacing was not the fashion then. I have come to look for displacement more frequently in a robust-looking woman than a slender one, for I invariably find the former dresses her waist tightly, and the latter possibly not. How can lacing affect the uterus? Please examine the engraving of the female form on a corset box, made to illustrate what may be accomplished by the persevering use of the contents, and tell me where the abdominal organs have gone to in such a shaped woman. Every physician knows how readily an impulse may be given to the uterus by any change in the position of the diaphragm, as in coughing or straining during a digital examination, and this illustrates the effect of the constant pressure upon the fundus by the organs above it. I have sometimes been unable to replace a prolapsed uterus until the clothing had been loosened. In such a case it would be very natural to implicate the lacing first. I have gradually come to the belief that nearly all women wear corsets, and that in ninety-nine one-hundredths of all who are termed well-formed the uterus will be found to occupy an unnatural position. I may as well say here that no woman will admit that her manner of dress is prejudicial to her health, and if you undertake to ascertain for yourself whether her waist is tightly dressed, you will be obliged to take her unawares, or your efforts will result in a signal failure."

CYANIDES IN RHEUMATISM.

M. Luton, of Rheims (*Bull. Gén. de Thérap.*), extols the cyanides in acute articular rheumatism. He has used zinc and potassium cyanides. The first is a white inodorous tasteless powder, insoluble in water, but probably soluble by the gastric juice. ~~M. Luton~~ administers 1½ grains daily, either in pill or suspended by mucilage. The cyanide of potassium ~~[illegible]~~, is administered in maximum doses of from 1½ to 2¼ grains, preferably in silvered pills on account of its disagreeable flavour. M. Luton reports many cases, and ~~affirms that~~ says it is certain that cyanides cure acute articular rheumatism in its fundamental form and its diverse transformations. They cure it by shortening the duration of the disease in a marked manner, and by diminishing the risks of complications. Doctor.

VARICOSE VEINS.

Mr. Marshall, ~~F.R.S.~~, ~~in a clinical lecture published in the~~ *Lancet*, ~~describes a new operation for the cure of this disease~~. Instead of obliterating the vein by one of the usual methods, ~~he~~ removes several inches of it altogether. ~~In a case he exhibited to the class the success was complete.~~ ~~Mr.~~ Annandale, of Edinburgh, has performed ~~a similar~~ operation with equal success. ~~It would seem, therefore, that the new method is likely to prove serviceable.~~ ~~Mr. Marshall~~ advises also the use of ~~the elastic ligature and subsequent antiseptic dressing~~.

The

ABLATION OF THE INVERTED UTERUS TAKEN FOR POLYPUS.

A writer in *l'Union Médicale* mentions a case in which the inverted uterus felt to the finger like a polypus. The surgeon slipped the chain of the écraseur on the neck of the supposed polypus, and removed it. The mass proved to be the whole inverted uterus. The attacks of metrorrhagia ceased, and the patient did well. Petit is said to have made the same mistake. Vieussens also removed the uterus under the same impression; the patient lived for ten years after the operation. The post-mortem examination showed that a small piece of the cervix had been left. The same misfortune happened to Bouchet, Slevogt, Boyer, and Jobert de Lamballe. The latter surgeon, when pulling down the mass with the vulsellum, perceived that he had to do with the uterus; he desisted, but the traction caused peritonitis, which carried off the patient.

PROGRESSIVE MUSCULAR ATROPHY.

Dr. Sonnier (*Arch. Méd. Belge*, No. 9, 1874) mentions the case of a smith, æt. 33, whose right shoulder, arm, and forearm gradually became emaciated, as well as the right hand. The most complete wasting was in the muscles of the thumb, which showed only folds of skin, and were painful on the slightest pressure. He could no longer raise the hammer, or even a spoon to the mouth. A nerve affection accompanied this, and the right side of the thorax became gradually emaciated. Probably the affection was caused by a lesion of the ganglia of the sympathetic which governed these parts, from the use of the over-heavy hammer. Treatment was, therefore, directed to arouse the central ganglia and ends of the nerves, and thus to bring back the nerve influence to the muscles. For this purpose strong cauterisations with red-hot iron were made use of several times in the twenty-four hours; then, for some time, douches with sulphur water, and inunctions with concentrated strychnia ointment, were used. In four months the atrophy disappeared, and the man was cured.

CEREBRO-SPINAL MENINGITIS.

Dr. Hirsch ("Transactions of the Berlin Medical Society," 1866) says this disease should be ranked with diphtheria and similar infectious diseases, where a definite poison takes effect chiefly on one part of the system. It is not like typhus or malaria after a period of malaise, or without it, shivering followed by hot fit and severe headache mark the invasion. There is often a feeling of dragging and stretching of the neck, usually vomiting, with delirium and somnolence. There is frequently tetanic stiff-neck, generalised hyperæsthesia, and convulsions, but less frequently paralysis. There is constipation, sleeplessness, and occasionally exanthematous skin eruptions. Recovery is gradual and slow, and no proper crisis occurs. When death ensues, there is coma, quick thready pulse, and collapse. Opiates, ice to the head, and local but moderate bleeding are recommended. Doctor

TREATMENT OF AMMONIACAL CYSTITIS BY BENZOIC ACID.

M. ~~M.~~ Gosselin (*Gaz. des Hôp.*) Stated that ~~has shown that the ammoniacal urine of man is poisonous to a great degree, and that it plays a considerable part in the production of accidents which occur after operation on the urinary passages.~~

~~From this notion to attempt at prophylaxis there is but one step, and Drs. Gosselin and Robin have written a memoir on the subject.~~

~~As~~ the ammoniacal condition of the urine ~~[illegible] constituent~~ in the production of accidents which occur after operations on the urinary passages, there is a great advantage in lessening it. Benzoic acid, and the balsams which contain it, and probably also other vegetable products (such as salicinic and cinnamic acid, &c.) may conduce to this result. The product, hippuric acid, acts in several ways: 1. By forming the hippurate of ammonia, which is less toxic than the carbonate of ammonia; 2. By retarding the decomposition of the urine, and consequently the production of carbonate of ammonia; 3. By preventing the formtation of phosphatic deposits of insoluble nature, which are a cause of Systitis, and may cause calculus in the bladder. The administration of benzoic acid should be advised in persons attacked with ammoniaco-purulent cystitis, and particularly if they are to be operated on for disease of the urinary passages. Doctor

DR. NOTHNAGEL ON THE OPTIC THALAMI.

Dr. Nothnagel (*Centralbl. f. M. W.*) has published some experiments recently made by him on rabbits to ascertain the function of the optic thalami. It was held that these bodies are the motor centres of the upper extremities; this was disproved by clinical observation. Ferrier thinks that the optic thalami have no relation to motion, but that they are centres of sensation. Nothnagel employed a little canula and trocar, from the extremity of which, by pressure on a lever in the handle, small diverging arms can be protruded and the thalamus thus broken up. He found that when both optic thalami were completely disorganised, the animals, on awakening, jumped about with facility; nor did they appear to suffer from cutaneous sensibility, living for weeks after the injury, the only thing noticed being their growing emaciation. He therefore states that destruction of the thalami causes neither motor palsy nor anæsthesia of the surface.

EXPERIMENTS ON DRUGS.

Dr. Lauder Brunton, F.R.S., in his Lectures on "The Experimental Investigation into the Action of Drugs," published in the *British Medical Journal*, observes that external respiration may be arrested or diminished, the blood rendered venous, the respiratory movements consequently increased, and dyspnœa and asphyxia produced by preventing the blood from reaching the air, as well as by preventing the air from reaching the blood. The blood may be prevented from coming into relation with the air: (1) By stoppage of the heart; (2) By embolism of the pulmonary artery; (3) By contraction of the capillaries of the lung.

1. *By Stoppage of the Heart.*—When respiration is suddenly impeded in any of these ways, the breathing becomes panting; and when it is suddenly stopped altogether, asphyxial convulsions occur. When the jugular vein is chosen for the introduction of drugs into the circulation, they come very quickly and without much previous dilution with blood into contact with the heart and pulmonary vessels, and thus affect them more strongly than they would do if injected subcutaneously, or into one of the veins of the extremities. When a large dose of quinine is thus injected, the heart may be stopped at once, and convulsions ensue. Any alteration of the heart's action produced by a drug is easily noted by means of a needle fixed in the ventricle.

2. *By Embolism of the Pulmonary Artery.*—This cause of interrupted respiration may easily lead an inexperienced observer to very erroneous conclusions regarding the action of a drug. Supposing him to inject an unfiltered solution of some extract into the jugular vein, he may find the respiration almost immediately afterwards become panting, the eyes start from their orbits, the limbs become convulsed, the head drawn back, and, after one or two quivering contractions, life becomes extinct. He at once concludes that the substance he has injected is one of extreme activity, whereas it may be really quite inert; the violent symptoms which followed its injection being due to the extract being imperfectly dissolved, and the suspended particles producing embola in the pulmonary vessels.

In some experiments on condurango, Dr. B. was at first misled by this circumstance, and believed that the drug had a tetanising action, like that of strychnia, as convulsions came on immediately after injecting a solution of the extract into the jugular vein. The same mistake has probably been made by Giannuzzi, (a) who attributes a convulsive action to the drug. By injecting the solution into the peritoneal cavity, Dr. B. found that it had no action whatever even when used in large quantities, while a solution of strychnia applied in the same manner would have acted nearly as strongly as when injected into a vein.

3. *By Contraction of the Pulmonary Capillaries.*—When contraction of the pulmonary capillaries is produced by a drug injected into the veins, the venous blood is hindered from reaching the left side of the heart, and the left ventricle and arterial system become empty, and the arterial pressure sinks while the right ventricle and venous system become swollen and turgid. The alteration of the blood-pressure in the arterial and venous systems may be measured by manometers connected with them; but while the arterial fall in the pressure is easily observed, there is considerable difficulty in measuring that in the veins, due to the rapid formation of coagula in the tube which is pushed down the jugular vein into the vena cava.

Another method is, to open the thorax and note the colour of the lungs and the comparative fulness of the right and left sides of the heart, and of the venous trunks, before and after injection of the drug. The animal is first narcotised, and a cannula placed in the trachea. The skin and cellular tissue are then divided along the middle of the sternum and reflected on each side. The muscles are then divided along the line of the costal cartilages, and artificial respiration is begun. The abdominal muscles are then separated from their attachment to the sternum and costal cartilages; the latter are cut through, except the first, which is left untouched in order to avoid wounding the internal mammary artery, and the sternum is bent upwards and retained in its position by a hook. In the rabbit, it is generally unnecessary to tie any vessels, as the bleeding stops quickly of itself; but if anyone should bleed much, it ought to be laid hold of and ligatured. Artificial respiration being carefully and regularly kept up by means of a metronome, the colour of the lungs, the size of each ventricle, and the number of cardiac pulsations is observed, the drug injected, and the observation repeated. The pulsations must be counted, because slowness of the heart's action, by affording time for the accumulation of venous blood in the right ventricle, would cause it to become distended, although there were no obstruction to the pulmonary circulation. When the drug to be experimented on is not a solution, but a vapour, it must be passed into the lungs.

In this way Dr. B. found that muscarin causes contraction of the pulmonary vessels, and produces dyspnœa, although the heart continues to beat, and artificial respiration is vigorously kept up. The lungs became pale, the right side of the heart swells up, and the left side and arteries become empty. The vapour of chloroform blown into the lungs causes a similar appearance, but it arrests the cardiac pulsations more or less completely at the same time.

Dr. B. then shows how the action of drugs on the pulmonary capillaries in the frog may be observed directly by means of the microscope. A frog is curarised, and a glass cannula, to which a short piece of india-rubber tubing is attached, is tied into its larynx. An incision is then made into the side of the frog a little below the arm, care being taken not to injure the lung in dividing the thoracic wall; and, the lungs being inflated through the cannula, one of them protrudes through the opening. The piece of india-rubber at the end of the cannula must then be clamped, so as to prevent the air from escaping and the lung from collapsing. The whole frog is then placed on a glass plate, which is fixed with a clip to the stage of the microscope. The lung is brought under the objective, and supported, if necessary, by a cork ring fixed to the glass plate with sealing wax. Any changes in the calibre of the pulmonary vessels are then readily observed by means of a micrometer placed in the eye-piece.

"Four years ago I attempted to ascertain by this method the effect of sudden changes from heat to cold on the lungs; and I have found that if a stream of warm moist air be first directed on the lung, and immediately afterwards a stream of cold moist air, the capillaries sometimes contract as much as one-third of their diameter under the influence of the cold.

"Dr. Sharpey informs me that the lung of the toad, unlike that of the frog, does not collapse even when no obstruction is offered to the escape of air; and therefore, if toads be used, the india-rubber tube and clamp on the cannula are unnecessary."

ARTERIO-CAPILLARY FIBROSIS.

At a medical society in Cork, Dr. Ringrose Atkins lately read a paper on this subject. Having first described the minute anatomy of granular contracted kidney, he detailed the views of Sir William Gull and Dr. Sutton on this so-called pathological condition, and then discussed a series of experiments and observations made by him, the result of which supported Dr. George Johnson's views on this subject. The conclusions arrived at from these experiments were as follows. 1. Glycerine alone will generally (though not in all cases) produce the so-called "hyalin-fibroid" appearances of the walls of the arterioles in specimens set up in it. 2. A mixture of equal parts of glycerine and camphor-water will invariably produce these appearances, corresponding almost exactly to those described by Gull and Sutton as being due to morbid processes. 3. The maximum distension and consequent "hyaline" appearance of the outer elastic coat of the arterioles is produced by the glycerine and camphor-water solution *acidified*. He next examined, on pathological grounds, the tenability of the above-mentioned author's views, pointing out many facts brought forward by them in support of their doctrine, which could be equally well explained on other grounds; then, adverting at some length to the views of Johnson, Traube, and Bamberger on the muscular hypertrophy of the walls of the arterioles found in chronic Bright's disease, he exhibited a specimen of an arteriole of the skin mounted in glycerine, where the hypertrophied muscular tissue was coexistent with the distended elastic outer coat.

(a) Giannuzzi and Bufalini, "Ricerche eseguite nel Gabinetto di Fisiologia della Universita di Siena," pp. 71-86; abstracted in the *Centralblatt für die Med. Wiss.*, 1873, p. 824.

THE OPHTHALMOSCOPE IN TRAUMATIC ACCIDENTS OF THE BRAIN.

M. BOUCHUT (*La France Médicale*) says that the ophthalmoscope which renders every day such services to medical diagnosis, is not less useful in surgery in traumatic accidents of the brain. M. Albert Bergeron, in an excellent article in *La France Médicale*, No. 96, Dec. 2, 1874, has just shown all the difficulties of diagnosis of concussion, of contusion, of compression of the brain, indicating the symptoms which influence the surgeon in deciding. Allow me to add to that article the result of my cerebroscopic investigations published in 1865 in my "Traité d'Ophthalmoscopic appliquée au diagnostic des Maladies du Système Nerveux," and verified since then by new observations. In concussion of the brain, the ophthalmoscope reveals no lesion of the papilla of the optic nerve nor of the retina and veins. It is very nearly the normal state of the fundus of the eye.

But in contusion of the brain followed by encephalitis, and in compression of the brain, the study of the fundus of the eye gives the measure of the mischief produced in the interior of the cranium. The papilla of the optic nerve is red, swollen, of flat appearance, more or less clouded and diffuse by reason of hyperæmia of the nerve. It is sometimes the seat of an œdema which extends to the neighbouring retina, and forms an acute neuro-retinitis. Moreover, the retinal veins are enlarged, tortuous, sometimes filled with thromboses, and indicating that the blood from the fundus of the eye passes with difficulty into the cranium, where the effusion embarrasses the circulation of the blood through the sinuses of the dura mater.

M. Bouchut says, "It was only this year in the service of M. de Saint-Germain that I was able to prove the lesions in the case of a boy in the Children's Hospital, who had a fracture of the petrous bone and quite a considerable meningeal effusion."

BRYANT'S LINE.

A MAN, seventy years of age, had fallen down, and sustained some injury about the upper part of the thigh near the hip-joint. He was unable to walk[redacted]. There was some shortening of the right lower extremity, and great impairment of movement. The actual nature of the disease was not apparent, but it was probable that there was fracture at the neck of the femur. To ascertain definitely what was the seat of the shortening, Mr. Bryant adopted [redacted] device. The measurements from the tip of the trochanter major to the lower border of the patella were first taken, and found to be equal on both sides. The question therefore was whether the shortening was at the neck of the femur. For this purpose, the patient being in bed, a vertical line was drawn from the tip of the anterior superior iliac spine on the outside of the hip to the horizontal plane of the body, then a second line from the tip of the trochanter major was drawn at right angles to this vertical line. The length of the second line was then measured and found to be three-quarters of an inch shorter on the injured side than a similar line on the opposite side of the body. By this means it was incontestably shown that the shortening of the limb was entirely in the neck of the bone. Mr. Bryant has employed this mode of determining shortening of the neck of the femur for some time past, and has found it of great utility. T[redacted] "Bryant's line" will henceforth be as important in determining shortening at the neck of the femur as "Nélaton's line" is in the diagnosis of dislocation of the head of the bone.

THE LEAST SACRIFICE OF PARTS AS A PRINCIPLE OF SURGICAL PRACTICE.

MR. BRYANT has brought this subject before the Medical Society of London. He explained the principle as one that forbade the surgeon to sacrifice more of the body than the absolute necessities of the case demanded; that called upon him to remove the disease, but no more; that enabled him in accidental surgery to make a flap for an amputation wherever he could, and in some cases to make no flap at all, but to leave the case to nature to repair; and, in pathological surgery, to cut through tissues infiltrated with inflammatory deposits rather than go above a joint or take away more of a limb than the necessities of the case demanded. He condensed the subject into three main propositions, each of which he illustrated by cases. The first proposition was: "That, in case of division or accident, no more of the body is to be taken away than the necessities of the case demand." He illustrated this chiefly from the surgery of the foot. At first sight, the proposition might appear to be a truism; but he asked if it were not true that, in cases of disease of the metatarsal bones or joints, surgeons were not too apt to regard the individual case as a good one for Chopart's operation, or Pirogoff's, or Syme's, and to forget that a good recovery of the foot might ensue on removal of the diseased bone or bones without any amputation at all. In support of this, he quoted Mr. Lister (Holmes's "System of Surgery," second edition, vol. v.), who expressed his opinion "that Syme's amputation is calculated to supersede entirely that of Chopart's, besides taking the place of amputation of the leg in the majority of cases formerly supposed to demand it." He entirely dissented from these views; he believed that, for local disease alone, no form of amputation of the foot should be entertained until less severe measures had been employed and failed; that, when amputation of the foot was called for, the minimum amount of foot should be taken away; that, when a Chopart's operation would suffice, a Pirogoff's should not be thought of; that, when a Pirogoff's was applicable, a Syme's should not be entertained; and that an amputation of the whole foot was never to be undertaken when the disease could be removed by less severe measures. The remarks made were as applicable to other parts as to the foot. Fingers and thumbs were often removed in cases of injury that, if left to nature, might often be saved. Joints were excised that might be saved by free incisions, or by the removal of necrosed bone; and amputations were performed above a joint or high up a limb in order that good flaps might be made. He illustrated all these points by cases, quoting seven cases of disease of the different tarsal bones, cured by the removal of the diseased bone; and three of extensive disease treated respectively by Chopart's and Syme's amputations, or by amputation of the leg. In disease of the bones of the foot, he had met with a case in which the resection of a tarsal bone was called for; for bone that was not dead was reparable, and to take this away was too often to take away that which, if left, would make good the parts that had died. The author then proceeded to illustrate the value of the proposition by the treatment of cases of diseased joint, and dwelt for some time upon the value of free incisions into suppurating joints. He referred to thirteen cases successfully treated by this method; and stated his belief that a free cut into a disorganised articulation was rarely followed by any other than a good result; that, when the suppurative process was due to synovial disease, a recovery without further surgical interference might be looked for; when it was due to local necrosis, the incision helped nature towards recovery by expediting exfoliation and the subsequent removal of the bone by either natural processes or some surgical proceeding. In more severe cases, the incisions gave relief, and in no way added to the mischief. The treatment of disease of the joints due to local necrosis was then considered, and a series of ten cases was read, including examples of disease of the shoulder, elbow, hip, knee, and ankle joints, in which recovery followed the removal of dead bone from the articulations. The second proposition was: "That, to carry out this principle, the surgeon may, in pathological amputations, fearlessly divide tissues infiltrated with organised inflammatory products, and even cut through the walls of suppurating cavities or through diseased joints, more particularly to save amputating above a joint." Mr. Bryant illustrated this proposition by the particulars of ten cases, in all of which recovery took place. The third proposition was: "That, in accidental surgery, parts irreparably injured are alone to be removed, and no healthy tissues are to be sacrificed in order to perform a recognised, and probably a named, operation; that, to these ends, the surgeon ought to utilise even doubtfully useful integument, or even leave a stump to granulate, when, by so doing, some portion of the shaft of a bone can be left, a joint saved, or amputation above a joint avoided." In the surgery of the hand, this practice was strongly advised, more particularly the injuries of the thumb. Amputation of a thumb, unless smashed irreparably, the author condemned; and, under all circumstances, the irreparably injured parts ought alone to be taken away, and doubtfully viable skin left. Cases were quoted to illustrate the proposition: ten of the toes; one of the foot; a Chopart's amputation, in which a long anterior flap was made; one of crushed arm, which was left to nature to granulate, and a good stump left; two of crushed legs, in which a rapid recovery followed amputation at the knee-joint; and one of ruptured popliteal artery, treated in the same way with success.

APPARENT DEATH OF A CHILD FROM CHLOROFORM.

Dr. Fieuzal (*Le Progrès Méd.*) mentions the case of an infant, æt. 6 years, on whom he performed the operation of iridectomy for some affection of the cornea, and where chloroform was the anæsthetic employed. The apparatus used was composed simply of a piece of wire round which flannel was wrapped, and which permitted of plenty of air getting to the child. The operation was over, and the child had not been breathing the chloroform for more than three minutes, when the operators were struck with the mortal pallor of the little patient, as well as the absence of pulsation of the heart. The child was hung up by the feet and the chest walls were strongly compressed about a dozen times, when the face of the child regained some colour, and it gradually recovered.

Chloroform is held by some to be quite safe in the case of children. This is an example to the contrary, and ether must ere long take its place.

LUPUS.

Dr. Friedlander (*Virchow's Arch.*, vol. lx., part i.) says that lupus is seen primarily in the form of small nodules, and that where these ulcerate or cicatrise the disease spreads by the formation of fresh nodules around. Virchow and others consider these nodules to be of the nature of granulation tissue. Rindfleisch says they are related to the sebaceous glands. Dr. Friedländer finds in lupus great infiltration of the true skin with round cells, like those of granulations, and numerous small globular growths composed of cells larger than those of granulation tissue. Similar structures are found in the neighbouring lymphatic glands. He identifies the little growths in the midst of the infiltrated skin in lupus, and in the glands with tuberculous nodules, and looks on lupus as a local tuberculosis, just like that found in the brain, testes, kidneys, &c. The minute globular bodies are in the form of numerous globular nodules, they are non-vascular, and also tend to degenerate, in all these characters resembling tubercles.

FUNCTIONS OF THE BRAIN.

Dr. Nothnagel (*Virchow's Arch.*, vol. lx., part i.) introduced a perforated needle and injected a drop of a solution of chromic acid into the brain of animals at various points. This kills the portion and hardens that in its neighbourhood. He found that destruction of the nucleus lenticularis on one side caused paralysis, which passed away. When both nuclei were destroyed, the animal after the operation lay quite motionless, with no attempt at voluntary movement. If leg after leg was gently pulled out, and the animal laid on its side with the legs stretched out, there was no movement. If the tail was pinched the animal gave a spring, drew in its legs, and took to its ordinary posture. He thinks that by destroying the lenticular nuclei, the communication between the voluntary centres of the cortex of the hemispheres and the lower centres is interrupted, and thus the voluntary impulses may be started in the cortex of the hemispheres, but they fail to reach the motor centres, just as in the case of fractured vertebræ a man may will to move his legs, but the communication is interrupted. In previous experiments he found that where a particular spot in the corpus striatum was irritated, the animal set off running violently.

SEPTICÆMIA.

Dr. Panum (*Virchow's Arch.*, vol. ii., 1874) comes to the conclusion that in decomposing substances there is a definite chemical poison which, in its composition, is more related to the vegetable alkaloids than to albuminous substances. This substance probably consists of several poisonous matters, it is not destroyed by boiling, is soluble in water, and precipitated by strong alcohol. This poison is probably produced by the bacterium termo, and may either be a secretion of that organism or a product of the decomposition of albumen. If a putrid solution be boiled for eleven hours, or filtered several times till perfectly clear and free from bacteria, it still produces the symptoms of putrid poisoning. If the fluid be evaporated to dryness, and the residue be extracted, first with alcohol and then water, the alcoholic extract does not produce the symptoms which the watery does. The putrid poison is often absorbed from the surface of wounds, and septicæmic symptoms ensue. The putrid infection is not inoculable. According to some there exists a disease which depends on the existence of a distinct organism in the blood, called microsporon septicum, which in crowded hospitals may produce pyæmia. Septicæmia is caused by the putrid poison.

ORIGIN OF TUBE-CASTS.

Dr. Lenator (*Virchow's Arch.*, vol. lx., 1874) says it is usually supposed that in the various diseases of the kidneys in which casts occur, there is increase of pressure of the blood on the Malpighian bodies, and that the fluid constituents of the blood ooze out through the walls of the vessels into the urinary tubes, where the fibrine of the blood is supposed to coagulate into tube-casts and the albumen to run off, forming the albumen found in the urine. Hence the name fibrine cylinders. Dr. Lenator says that these are not fibrine at all, they are albuminous, but not fibrine. The theory of increased pressure is seriously invalidated by the fact that in venous congestion of the kidneys less urine is secreted than normal; and he accounts for this by saying that in venous congestion there is actually a diminution of pressure on the Malpighian tufts. The arrangement, he adds, of the vessels in the kidney is such that in venous congestion the increased pressure is not at all likely to extend back to the Malpighian vessels, since the capillaries of the kidneys are formed partly by the breaking up of the arteries directly, and partly by the efferent vessels of the tufts, so that increased venous pressure would not reach the tufts. Observers are agreed that increase of the arterial pressure on the kidney does not produce albuminuria. He considers that the tube-casts are products of the epithelium of the tubules.

NEMATODE HÆMATOZOA.

Staff-Surgeon T. R. Lewis, M.B., has contributed an article, illustrated by excellent plates and wood engravings, to the Tenth Annual Report of the Sanitary Commissioner with the Government of India, in continuation of his previous observations. It will be remembered that Dr. Lewis, in a monograph that appeared as an appendix to the Annual Sanitary Report for 1871, announced his discovery of a microscopic nematode worm in countless numbers in the blood.

Dr. L. arranges his remarks under two heads—(1), the chief reasons for the belief that chyluria and the elephantoid state of the tissues are associated with the presence of a microscopic hæmatozoon; and (2), in what manner, such connection being satisfactorily established, this fact can aid us in offering an explanation of the evidence we possess that the disease is due to mechanical interruptions to the flow of the nutritive fluid in the capillaries and lymphatics.

With regard to the first, detailed histories of a number of individuals affected in this manner have been published by Dr. L., and in all the *Filaria sanguinis hominis* has been detected. He has now traced the filariæ to the blood *direct* in eleven, and detected them in one or other of the various tissues and secretions of the body in more than thirty individuals. The history of one of these persons could not be ascertained, but all the others were known to suffer, or had suffered, from chyluria, elephantiasis, or some such closely allied pathological condition.

With reference to the second head, our knowledge is not so exact, and almost all the inferences have to be drawn from observations made in connection with the hæmatozoon described as occurring in pariah dogs. Judging from what may be seen in these, and from data derived from those post-mortem examinations which have been made of individuals affected with this parasite, Dr. Lewis thinks that the interference with the flow of fluid in the lymphatic capillaries and smaller blood-vessels may not unreasonably be attributed to one or other of the following causes:—1. To tumours produced by encysted mature entozoa along the course of the blood-vessels and lymphatics, impeding the flow of fluid in them by pressure either directly or indirectly by interfering with the functions of the nerves supplied to the part. 2. To the active migration of the immature, or rather partially mature, parasite, the act of perforating the tissues—nervous or vascular—producing more or less permanent lesions. 3. To the activity of the liberated embryos in the capillaries causing rupture of the delicate walls of these channels, in which possibly ova may have accumulated, owing to their size, or an aggregation of active embryos taken place, either accidentally or by the parent having migrated to the capillary termination of a blood-vessel, and there given birth to a brood of microscopic blood-worms. The walls of the capillaries once having given way, the embryos pass into the adjacent lymph channels, whose extremely delicate boundaries practically offer no impediment to the further progress of such active organisms. If the lymphatic spaces be situated in intimate relation with a secreting surface, escape of the minute filariæ, as well as the escape of fluid from the lymphatics, with the ordinary secretion of the part, would seem to be a natural consequence. Dr. Lewis has likewise discovered hæmatozoa in the pariah dogs of India.

PHOSPHORUS.

Dr. E. Labbee (*Le Mouvement Méd.*, No. 4, 1875) remarks that when phosphorus is taken in poisonous doses it causes jaundice, hæmorrhages, and strabosis of various organs. Since it has been introduced into therapeutics it has been found to give great activity to the muscles, to cause hyperæsthesia, ardor, urinæ, and erection. Phosphorus awakens the genital organs when long extinct in their functions, and is thus an aphrodisiac of the most potent order.

M. Boulet has reported to Deleus how an old man, having taken some drops of phosphoretted ether, experienced an imperious desire to sacrifice to Venus (*Dict des Sc. Méd.* xli., 507); and Professor A. Leroy himself, and Dr. Boultartz found that some grains of phosphorus augmented venereal diseases.

Several cases in which dangerous results followed the taking of the drug led to its complete oblivion as a therapeutic agent. In 1874 Dr. Laboutbène had the case of a woman who swallowed the phosphorus contained in two boxes of matches. He gave emetics and magnesia, and then 30 grammes of the essence of turpentine one day, and 10 grammes a day for some days. She rapidly recovered.

SYPHILITIC TUMOUR IN THE BRAIN.

A case is reported in *Le Courrier Médicale*, No 51, of a woman, aged 35, who entered the Hôtel-Dieu under the care of Dr. Béhier on the 18th November, 1874. She was a saleswoman in the market, and up to 1869 always enjoying good health. Six years ago she remarked on her husband pustules, which awakened her attention, and afterwards she noticed similar pustules on her generative organs. A practitioner she consulted gave her mercurial pills and iodide of potassium, and this treatment she followed four months, suspended it, and resumed it again for an eruption, when the accidents went away, but she still continued treatment. In 1873 she felt a little movable tumour under her left lower jaw, and as it tended to suppurate, she entered the Hôtel-Dieu, and was treated for syphilis. Since then no accident occurred until October last, when pains occurred in the right arm, and the arm became weak, gradually becoming paralysed when she entered hospital. The face deviated to the left, the tongue deviated to the right, and there was deviation of the uvula to the left. On the right side the orbicularis palpebrarum and levator palpebræ superioris were intact, but on the left there was prolapse of the eyelid, notable dilatation of the pupil, dimness of the cornea, and slight amblyopia. There was diplopia when the patient looked towards the left. M. Galezowski found no abnormal appearance in the ophthalmoscope. The faradaic excitation is felt by the paralysed muscles. The patient was a little deaf. The right arm is very weak, but the lower limbs are normal in strength. The glands of the groin were much enlarged.

There was then, to sum up, paralysis of the right facial nerve, of the levator palpebræ superioris, and muscle of the iris, and of the 4th nerve, with a paresis of the brachial plexus on this side. This diminution of mobility in one limb has been rarely observed. Zambaco has united six cases of it. Syphilitic paralysis of the facial is pretty frequent. Ladriet and Oharriere have united thirteen observations of it. It is always noticed in persons under 40.

Professor Béhier gave the diagnosis of syphilitic tumour of the cerebrum. As to its position, it occupies probably the cerebral peduncles, but its sphere of compression, as Duchenne de Boulogne observes, ought to be very extended and irregular, for it should comprehend the nuclei of origin of the right facial, left 4th, and 3rd motor oculi of the left. These nuclei, as we know, are rather far from each other; but what seems certain is that the tumour is more to the left than the right, since the right arm alone was paralysed.

Professor Béhier therefore gave the following prescription. Each day there is to be taken:

1st. One pill of one centigramme of iodide of mercury.
2nd. Two grammes of iodide of potassium.
3rd. One centigramme of extract of opium.

After twenty days of treatment the patient was almost entirely cured; the facial paralysis, as well as the paresis of the right arm had disappeared; but the falling of the upper eyelid still slightly subsisted. This observation, says the reporter, suggests a reflection that if the patient, in place of only commencing her treatment in the course of the secondary symptoms, had had the syphilis treated at its commencement, she would not at 35 have had these symptoms, which may return again in age.

SYPHILITIC CARIES OF THE PETROUS PORTION OF THE TEMPORAL BONE.

A patient, V., aged 27, came into the Hôpital Saint-Antoine under Dr. Misnet, on 24th March, 1873, for a suppuration of the left ear, which had lasted for several months (*Le Progrès Méd.*, No. 1, 1875). About three years and a half before, this man had syphilis; at his entry into the wards he presented no specific symptoms, but had severe pains in the ears. After six months' stay in the hospital, and in spite of anti-syphilitic treatment, the suppuration augmented; the pains became more acute, and the deafness almost complete.

Towards the end of July, 1873, there was seen a little œdema above and behind the external auditory meatus, and the suppuration was very abundant; the patient had horrible pains in the left ear, which prevented him having any sleep. In the month of August, the œdema remarked of the external meatus had considerably extended, and now extended upwards, over the whole left parietal surface, behind, as far as the nape of the neck. In these points, and especially at the level of the parietal bone, the hairy scalp was raised and separated from the cranium by a thick layer of liquid, which was pasty; the skin was smooth, tense, and there was complete baldness; whilst on the right side of the head some hairs were still remarked. The patient, who refused any chirurgical operation, was profoundly cachectic.

On the 20th September, the œdema passed the interparietal suture, and extended now to the three-fourths of the cranial arch; it advanced in front as far as the frontal, and behind extended to the nape. He died on the 27th September, having maintained his intelligence up to the last moment, and never having had any brain symptoms.

Autopsy.—The lungs, heart, kidneys, and spleen were intact. The liver was small, retracted, granular, and extremely hard; it gave no amyloid coloration with the tincture of iodine, and was a complete type of cirrhosis.

After removing the cranial arch by the saw, there was found between the scalp and bone a vast collection of thick, greyish, and grumous pus, mixed with little sequestra of bone. The auricular muscles and the temporal of the left side, as well as the aponeurosis of the cranium and part of the muscles at the back of the neck were entirely destroyed.

At the level of the external meatus a great number of small sequestra of bone came away; the mastoid apophysis itself had almost completely disappeared, so that a probe could attain up to the *dura mater*. This latter, in the points where it clothes the internal aspect of the parietal bone, and the temporal, was thickened by an organised false membrane, and between them was found pus and some black hæmorrhagic points; there existed a true pachymeningitis. The superior petrual sinus and the left lateral sinus were obliterated by clots. As to the brain, it was quite intact.

There was found besides this, on the convex aspect, as well as on the concave, a great number of small holes dug out in the mass, and where the bony substance had disappeared. These holes were separated by whitish islands, very hard, when the bony substance, on the contrary, was thickened, and formed masses of compact tissue. These had taken place probably at their points of osteitis in places, and condensation in others.

The petrous portion of the temporal was in great part destroyed; the middle ear was absolutely unrecognisable; the internal carotid artery could, however, be followed for a considerable distance amidst the masses of bony sequestra and putrilage; it appeared normal.

Reflections.—The progress of this lesion is easily traced. Under the influence of syphilis there was unrestrained suppuration of the middle ear for 18 months, complete destruction of the part, and invasion of pus in the cells of the mastoid process, gradually causing necrosis of these parts; then the suppuration extended to the adjacent parts, destroyed the muscles and soft parts.

TOPICS OF THE TIME.

ALCOHOL.

The Cantor Lectures at the Society of Arts have just been concluded. The lecturer this year was Dr. B. W. Richardson, F.R.S., who took for his subject "Alcohol." The course consists of six lectures, of which we proceed to give an abstract.

The first lecture was on "The History of Alcohol in relation to some of its Varied Services to Mankind in the Arts and Sciences." Dr. Richardson said that the first employment of the term "alcohol" was obscurely recorded. According to Bartholomew Parr, it was first employed by the Arabians to designate a powder used by Eastern women as a cosmetic. As this powder was impalpable, the same name was afterwards given to other subtle powders, and finally to spirit of wine. The first scientific use of the term that Dr. R. could discover was in Lemert's "Chemistry," published in 1698.

Dr. R. then recounted the history of the production of alcohol, which, he said, was in some form or other known to mankind at a very early period of the history of the human race. Egypt, Greece, and Rome all claimed the invention. The Greeks pretended that it was first discovered in Ætolia by Orestheus, son of Deucalion, whose grandson, Œneus, was named after Oinos, the old name of the vine. Thus, oinos—oinon—vinum—wine. The practice of exciting fermentation and thus producing alcohol once known, the knowledge was extended, until from varied vegetable substances wine was successfully extracted. From the juice of the grape the transition was easy to other fruit-juices, thence to juices exuding from trees, as from the Eastern palm tree, and then to such substances as manna and honey. From fruit, also, it was a short step to seeds, and from succulent seeds again to hard ones of the kind we call grain. From all these sources was produced for centuries different fluids containing alcohol, and all bearing a common name—viz., wine. Of this there were numerous varieties characterised by adjective appellations. Dr. Richardson enumerates forty-four ancient Roman wines, and says that his list by no means exhausts the names of wines of ancient date. The Falernian is believed to have been like modern Madeira, and was usually kept ten years before being drunk; after twenty years it affected the body unfavourably, causing headache, according to Galen. Lesbian wine was used as a diuretic. Myndian, Halicarnassian, Rhodian, and Coum were made with salt water, and were considered to promote digestion, and not to be intoxicating; Cnidian was believed to produce blood, and to be a laxative; Adrian was considered a diaphoretic; Passum Creticum is believed to be identical with our ancient Malmsey. The wine called Murrhina has a curious history. The Greeks had a wine of this name, consisting of pure wine perfumed; the Romans had one similarly named, consisting of wine mixed with myrrh. It was given to those about to be tortured, in order to intoxicate them, and remove the sense of suffering. Dr. Richardson said that the ancient wines contained a very small amount of spirit when compared with our modern wines. Falstaff could easily drink a pint of sack off at one draught when it only contained 7½ per cent. of alcohol. The malt liquors of the last century, however, according to Neumann, were of much the same strength as those of the present.

The only other diluted rival of wine obtained by fermentation was the liquid derived from corn. Tradition assigns the art of making this product first to the god Osiris, and afterwards to the goddess Ceres. This fluid was afterwards called beer by the Saxons. In its original state beer was what is now called sweet fluid, or wort fresh from the vat, to which no other substance was added. In the 9th century it began to be treated with the hop. Henry VI. forbid the use of hops, as making the beer unwholesome, and an order forbidding the use of hops and sulphur was made in the reign of Henry VIII., but the hops finally won their way.

At length a new process was introduced—viz., that of distilling wine and obtaining from it a spirit containing no water. This discovery has been ascribed to Albucasis, or Casa, an Arabian chemist and physician of the 11th century; but this has not been satisfactorily established. It is true, though, that the discovery sprung from the school of Albucasis. The alchemists were acquainted with pure spirit, and, says Boerhaave, when they had rendered it as subtle as possible, they used it in preparing all their secret menstruums.

Brandy, from *brennen*, to burn, is a comparatively late term. Gin, from Geneva, is a term which was not used two centuries ago. The word rum is believed to have been introduced in America. Whisky has not been Anglicised more than 150 years.

Dr. Richardson, in summing up the history of alcohol, said that there were four stages in the general history of alcohol, from the first to the time when it came strictly under analytical chemical observation, and, in regard to common knowledge, to the present time.

(1) The stage of manufacture of wine or beer by fermentation. A stage extending from the earliest history until the time of the adepts, say about the eleventh century of the Christian era.

(2) A stage when there was distilled from the wine a lighter spirit called, first, spirit of wine, and afterwards alcohol.

(3) A stage when this subtle or distilled spirit from wine was applied in its refined or impure state to the arts and to science.

(4) A stage when this same process of distillation was applied to the production of alcoholic spirits for the use of man as spirituous drinks, under the names of brandy, gin, whisky, rum—a stage comparatively modern.

The lecturer then, leaving for a time the subject of wine and alcohol, said he would dwell briefly on the uses to which these fluids have been applied for other purposes. He said that from the first the antiseptic property of wine was recognised, and it was used to preserve different animal and vegetable substances. The Roman butchers used it in preparing their salted meats. This property of wine, however, had been recognised long before the time of the Romans. Palm wine was used by the Egyptians in the process of embalming. At a very early period also was wine employed for the purpose of extracting the active principles from plants, &c. From a plant called mandrake the ancient Greeks extracted, by means of a wine, a narcotic substance. Some, says Dioscorides, boil the root in wine down to a fluid, part and preserve the decoction, of which they administer a cyathus (about a common wine glassful) in want of sleep, or for severe pains of any part, and also before operations with the knife or cautery, that they may not be felt. Again, he says, a wine is prepared from the bark without boiling, and three pounds of it are put into a caders (about eighteen gallons) of sweet wine, and three cyathi of this are given to those who are cut or cauterised, when, being thrown into a deep sleep, they do not feel any pain. Again he speaks of a preparation of mandragora called minon, which causes infatuation and takes away the reason. Under the influence of this agent the person sleeps, without sense, in the attitude in which he took it for three or four hours afterwards. Pliny bears evidence to the same effect, and adds that some persons have sought sleep from the smell of this medicine. Lucius Apulius, the author of the "Golden Ass," says that if a man has to have a limb mutilated, sawn, or burnt, he may take half an ounce of mandragora in wine, and whilst he sleeps the member may be cut off without pain or sense. It is unquestionably to this wine our own Shakespeare refers in his half-imaginary, half-legendary Middle Age history.

In order to verify the truth of these assertions, Dr. Richardson says that (through the kindness of Mr. D. Hanbury, F.R.S.) he procured a fine specimen of mandragora root, and made some mandragora wine according to the directions given in the old writers. This he tested, and found that it had precisely the same narcotic properties that were ascribed to it. He found that it produced in animals a sleep of four hours, and that on awakening there was an excitement which tallied to the phenomena observed by the ancient physicians. Dr. R. then went on to speak of other anæsthetics, and gave the following list of substances that will produce anæsthetic sleep. Those of which the names are printed in italics are prepared from alcohol.

Nitrous oxide gas
Carbonic oxide gas
Carbonic acid gas
Bisulphide of carbon
Light carburetted hydrogen
Hydride of methyl or marsh gas
Methylic alcohol
Methylic ether gas
Chloride of methyl gas
Heavy carburetted hydrogen gas
Olefiant gas or ethylene
Ethylic, or absolute ether
Chloride of ethyl
Bichloride of ethylene (Dutch liquid)
Bromide of ethyl, or hydrohomic ether
Hydride of amyl

Bichloride of methylene
Terchloride of formyl, or chloroform
Tetra-chloride of carbon
Amylene
Benzol
Turpentine spirit.

In his second lecture Dr. Richardson went on to speak of the chemistry of alcohol. He referred to the alcohol group of bodies, and spoke of the different alcohols. In particular he described the properties and action of methylic, butylic, amylic, potassium, sodium, and mercaptan, or sulphur alcohol, in succession. We cannot give his remarks on this part of the subject owing to want of space.

In his third lecture Dr. Richardson took for consideration the primary physiological action of ethylic or common alcohol on animal life. He said that this subject might be discussed in two ways—viz., 1. as to the mere physical action of alcohol on the body; and, 2, as to its action as a food. Many substances, such as chloroform or opium, produced very marked results when taken into the system, but did not in any way act as foods or sustain the vital powers. Other substances acted as foods. Alcohol was peculiar in that we must consider it from both of these points of view. He would first discuss the purely physical action of alcohol, reserving the question of its qualities as a food for a future lecture.

Dr. Richardson said that the problem before them was a very simple one. The sum of £117,000,000 of money was invested in alcohol in this country. The larger part of the alcohol produced was consumed by human beings. It was a question, he said, particularly worthy of that society to determine what was the good of this invested capital and the substance it supplied.

Alcohol might be introduced into the body by many channels, but it passed into the blood in every case. The shortest way was by inhalation; the longest and most ordinary way by the stomach. When taken into the stomach, however, alcohol cannot be absorbed into the system until it has undergone a certain degree of dilution with water. When we dilute alcohol with water before drinking it we quicken its absorption. If we do not dilute it sufficiently it is diluted in the stomach by transudation of water in the stomach until the required reduction for its absorption: the current then sets in towards the blood, and passes into the circulating canal by the veins.

Alcohol, in its passage through the body, first reached the blood, and coming in contact with all parts of the blood, it produces disturbing action if present in sufficient quantity. It may cause the corpuscles to run too closely together and to adhere in rolls; it may modify their outline, making the clearly-defined smooth outer edge irregular or crenate, or even star-like; it may change the round corpuscle into the oval form; or in very extreme cases it may produce a truncated form of corpuscle, in which the change is so great that if we did not trace it through all its changes we should be puzzled to know whether the object were indeed a blood-cell. These changes were due to the action of the spirit on the water contained in the corpuscles. The spirit absorbed this water from the corpuscles. Whilst the changes above described are going on, the function to absorb and fix gases is impaired, and when the aggregation of the cells in masses is great, other difficulties arise, for the cells united together pass less easily than they should through the minute vessels, and thus impede the current. Alcohol in excess acts also on the fibrine or the plastic colloidal matter. On this the spirit may act in two ways, according to the degree in which it affects the water that holds the fibrine in solution. It may fix the water with the fibrine, and thus destroy the power of coagulation; or it may extract the water so determinately as to produce coagulation. This explains why in acute cases of poisoning by alcohol the blood is sometimes found quite fluid, at other times firmly coagulated in the vessels.

Alcohol paralysed the minute vessels and allowed them to become dilated with blood. But the action of the alcohol does not stop there. With the disturbance of power in the extreme vessels more disturbance is set up in other organs, and the first organ that shares in it is the heart. The vessels being relaxed, and resistance removed, the heart begins to run quicker, and the heart-stroke losing nothing in force, is greatly increased in frequency, with a weakened recoil stroke. It is easy to account in this manner for the quickened heart and pulse which accompany the first stage of deranged action from alcohol, and it is interesting to know to what extent this increase of vascular action proceeds. The information on this point is exceedingly curious and important.

Dr. Richardson then referred to his own experiments on pigeons, and gave an account of the researches of Professor Parkes and the late Count Wollowicz.

Dr. Richardson said that the stage of primary excitement of the circulation induced lasted for a considerable time, but at length the heart flagged from over-action, and requires the stimulus of more spirit to carry it on in its work. When we have taken what we may call a moderate amount of alcohol, say two ounces by volume, a distinct physiological effect follows, bringing on to the first stage of excitement. The reception of the spirit arrested at this point, there need be no important mischief done to the organism; but, if the quantity imbibed be increased, further changes quickly occur. All the organs of the body are built upon the vascular structures, and therefore it follows that a prolonged paralysis of the minute circulation must of necessity lead to disturbance in other organs than the heart.

The flush seen on the cheek during the first stage of alcoholic excitation is commonly presumed to extend merely to the parts exposed to view. It cannot, however, be too forcibly impressed that the condition is universal in the body. If the lungs could be seen, they too would be found with their vessels injected; if the brain and spinal cord could be laid open to view, they would be discovered in the same condition, and so on. Dr. Richardson said he had witnessed this vascular condition of the lungs of an animal killed suddenly when under the influence of alcohol. He said that he once had the opportunity of observing the same phenomenon in the brain structure of a man who, in a paroxysm of alcoholic excitement, decapitated himself under the wheel of a railway carriage, and whose brain was instantaneously evolved from the skull. The brain itself, entire, was before him within three minutes after death. It exhaled the odour of spirit distinctly, and its membranes and minute structure were vascular in the extreme. The white matter of the cerebrum, studded with red points, could scarcely be distinguished, when it was incised, by the natural whiteness; and the pia mater, or internal vascular membrane covering the brain, resembled a delicate web of coagulated red blood, so tensely were its fine vessels engorged.

He would add that this condition extended through both the larger and the smaller brain, the cerebrum and cerebellum, but was not so marked in the medulla or commencing portion of the spinal cord.

Dr. Richardson said that when the action of alcohol was continued beyond the first stage the function of the spinal cord was influenced. This marked the second degree of its action. When carried still further the brain centres become influenced; they are reduced in power and the controlling influences of will and judgment are lost. Finally, the superior brain centres are overpowered; the senses are beclouded, the voluntary muscular prostration is perfected, sensibility is lost, and the body lies a mere log, dead by all but two-thirds, on which alone its life hangs.

Thus, according to Dr. Richardson, there are four stages of alcoholic action in the primary form:—(1) A stage of vascular excitement and exhaustion; (2) a stage of excitement and exhaustion of the spinal cord, with muscular perturbation; (3) a stage of unbalanced reasoning power and of volition; (4) a stage of complete collapse of nervous function.

In his fourth lecture Dr. Richardson discussed the question, Is Alcohol Food? To this question he gave a negative answer. At the same time he admitted the validity of the views advocated in this country by the late Dr. Anstie and Drs. Thudichum and Duprè, and abroad by Schulinus. Their views, however, that alcohol is disposed of in the body by other processes than simple direct elimination were not admitted by Dr. Richardson to be any proof that alcohol is in any way a food. Dr. Richardson considered the evidence to be conclusive that alcohol is not a builder of any tissue whatsoever, probably not even of fatty tissue. It was therefore either an agent for the supply of force, or else it was not a food at all. Dr. Richardson referred to Dr. Anstie's experiments, showing that from animals under alcohol none of the secretions yielded more than a fractional part of alcohol, and that when an animal which had been alcoholised was killed (two hours after it had received 95 grains of spirit), only a fraction (23·66 grains) of the quantity of alcohol administered could be detected in the whole body, although every fragment of tissue, with all the fluid and solid contents, was subjected to analysis. Dr. Richardson said we were driven to the conclusion that in the animal body alcohol is decomposed. He said that the inference that might be drawn is fair enough—that the alcohol is lost by being burned in the body. If it were so alcohol in the process of being burned or oxidised in the body would supply force—*i.e.*, heat. This, however, is not the case. Dr. Richardson repeated the statement first made by him in his report to the British Association at Birmingham in 1866, that the general action of alcohol is to reduce the animal heat. He said that the progressive states of change of animal function from alcohol were four in number. In the first stage—a stage of excitement—the external temperature of the body is slightly raised. This effect, however, he held was due to a greater loss of heat—not to the combustion or oxidation of the alcohol. This increased loss of heat was owing to the more rapid radiation of heat from the larger surface of warm blood in the vessels partly paralysed by the alcohol. The internal temperature is falling during this first stage. In the second and third stages the temperature declines, falling below the normal. As the fourth stage is approached the decline becomes dangerous. This reduction is marked in some degree in proportion to the depth of the coma that follows the intoxication. Throughout every stage, therefore, except the first, the direct action of alcohol was to reduce the temperature of the body.

With the first conscious movements of recovery there is a faint rise of temperature, but such is the depression that these movements exhaust and lead to a further reduction. In extreme cases so long as three days had been required to bring back the natural temperature.

Dr. Richardson said that the inference from all these facts was that the alcohol is not burned after the manner of a food which supports animal combustion, but that it is decomposed into secondary products by oxidation, at the expense of the oxygen which ought to be applied to the natural heating of the body. He supported these conclusions respecting the action of alcohol on the animal temperature by another series of observations, in which the effect of this substance was traced on the muscular power. He showed that the excitability of muscle was reduced, just in the same way as the animal heat, until finally, as the spirit brings on narcotism, so is the muscular power brought down to a state of extreme prostration.

The fifth lecture was "On the Secondary Action of Alcohol on the Animal Functions, and on the Physiological Deteriorations of Structure incident to its excessive use." Dr. Richardson said that it was his business in that course of lectures to treat upon the specific action of absolute alcohol. He had, therefore, specially avoided all reference to the spirituous drinks of which it forms a part. But he wished it to be understood that the source of the action in every strong drink was the spirit it contained; and that if all the liquors sold under the name of wine, brandy, gin, rum, whiskey, ale, stout, perry, cider, and so forth, were divested of their alcoholic spirit, they would contain comparatively little of anything that would affect those who partook of them.

Dr. Richardson, however, said that it was but fair to admit that some bad effects do spring from wine and kindred drinks independently of the pure spirit they contain, and that something less of evil than now obtains would be secured if none but natural wines and ales were drunk by the people. "At the present time," he said, "the characters of pure ethylic alcohol are scarcely known."

A *bonâ-fide* wine derived from the fermentation of the grape purely could not contain more than seventeen per cent. of alcohol; yet our staple wines, by an artificial process of fortifying and brandying, are brought up in sherries to twenty and in ports to even twenty-five per cent. Many wines and spirits are charged with amylic alcohol. Other wines are charged with foreign volatile substances to impart what is called bouquet, and still other so-called wines (he alluded specially to the effervescing liquids sold under that name) are actually often undergoing the fermenting process at the time they are drunk, and thus are invited to complete their fermentation in the stomach.

The admitted addition of some actively poisonous substance to alcoholic drinks in order to produce a new luxury was, said the lecturer, a still more disastrous evil. He illustrated this by instancing absinthe, the effects of which he described as resembling those of haschish, the narcotic of the East, which has been known for so many ages as the nepenthus of Homer, and which owes its properties to the presence of extract of Indian hemp, or cannabis indica. Dr. Richardson said that he agreed with Dr. Decaisne in maintaining that the use of absinthe as an article for human consumption ought to be legally forbidden in all civilised communities. The evils resulting from the intentional additions of poisonous agents to the alcohol of ales, wines, and spirits were insignificant as compared with those resulting from the use of absinthe, but still they were not to be ignored. It is true that we often hear accounts of the effects for evil of bad wine, when, in fact, the evil is truly due to the excess of ordinary alcohol that has been taken by the complainant. At the same time it is not to be denied that there exists in our midst a system of mixing, compounding, blending, and reducing wines and spirits which, carried to artistic perfection, is additionally prejudicial to the business of selling the various alcoholic beverages.

To be just, however, to own age, we must acknowledge that this artistic performance is not an invention of it. The adulteration of wine is one of the oldest devices, extending from the Greeks and Romans onwards to this day. In the Middle Ages many prohibitory acts were passed against it by various governments. As late as the close of the seventeenth century an act was passed by Duke Everhard Louis of Wurtemburg, making it an offence punishable with death and confiscation of property to adulterate wine with bismuth, sulphur, or the salt of lead called litharge, now known as the yellow protoxide of lead. In the year 1705-6 John Jacob Ernhi, of Eslingen, was actually beheaded for carrying out adulteration with the forbidden poisonous lead compound.

The lecturer then went on to speak of modern adulterations. He said that the practice of adulteration the least hurtful was that which was carried on in ales; such was at any rate his own opinion of the ales sold in London, and he spoke from a practical knowledge of the facts. He said that he had never found a dangerous ingredient present in any single instance. The grand adulteration was water. There was a prevailing notion that to malt liquors bitter substances, such as strychnine, or narcotic substances, such as cocculus indicus, are added. Neumann says that in his time clary, cocculus indicus, and Bohemian rosemary were added to malt liquors to increase their intoxicating powers, and states that Bohemian rosemary produced a raving intoxication. Dr. Richardson said he knew it was urged in this day that there is no known application for the quantity of cocculus indicus that is sold, except it be for the adulteration of malt liquors. He would not dispute the matter, but content himself with stating that he had never himself detected any foreign body of the kind, and that in the whole of his experience of the effect of malt liquor on man, he had never known a symptom produced indicative of the effect of such substances. The stronger ales and stouts were injurious mainly from the alcohol they contain.

Dr. Richardson then went on to speak of wines and spirits, and the various substances present in them as impurities, or in vogue as adulterants. He referred to fusel oil, oil of juniper, oil of bitter almonds, potash, alum, nitric acid, oil of vitriol, and butyric acid as specially injurious substances when present as adulterants. Redding, in his history and description of modern wines, narrated in his day the many recipes that were openly published in the then existing publishers' Guides and licensed victuallers' Directories for the artificial manufacturing of wines, and for modifying spirituous liquors. Dr. Richardson said he had gone for his information to a similar work of the present day, called the "New Mixing and Reducing Book," which he said he understood was one of the handbooks of the retailer,—the same to him as the Pharmacopœia is to the druggist, and followed as implicitly.

The lecturer then went on to consider the phenomena of chronic intoxication from alcohol. In the early stage this agent produces arterial relaxation, upon which follows extreme cardiac sensitiveness. The circulation is consequently quickened, and deteriorations of structure follow. On this point the lecturer argued that by its continued contact with the colloidal tissues alcohol must injure them, inasmuch as there are very definite changes produced by its action on blood corpuscles and other textures out of the body.

In the sixth and concluding lecture, Dr. Richardson continned the subject of the deteriorations of structure caused by alcohol, and considered its influence on the vital functions, and the mental phenomena induced by its use. Following up the argument of his fifth lecture, he observed that all membranous tissues are colloidal structures, and that all the vital organs are enveloped by such textures. The food we assimilate becomes colloidal in the blood. Upon all membranous tissue, he said, alcohol exerts a perverting action, giving rise to thickening, shrinking, and consequent inactivity of function. This arises from the alcohol depriving them of water. A series of changes are thereby induced analogous to those observed in acute alcoholic poisoning. At an early period the emotional centres are affected; hence the alternate exhilaration and depression so frequently observed in those who indulge in stimulants. In such cases the vessels of the brain, lungs, liver, stomach, and kidneys are all distended. The stomach is particularly apt to suffer, as it is exposed to the direct action of the agent in its most concentrated form. Alcoholic dyspepsia is therefore only too common, and the lecturer declared it to be the worst form of indigestion.

From this Dr. Richardson passed to the nervous derangements of chronic alcoholism, and attributed these to the effect of the fluid on the neurilemma, the perverted condition of which might give rise to pressure within the sheath. He traced neuralgia, sciatica, &c., to this cause. Another nervous affection was alcoholic insomnia, which he attributed to the injured state of the cerebral vessels, and the unnatural tension to which they are subjected by the increased heat of the heart.

The organic lesions of the liver and kidneys, so well known to all our readers as the results of drinking, were briefly considered; and it was then shown that the lungs do not escape, in proof of which Dr. Richardson described at length alcoholic phthisis, which, now generally recognised, he was the first to differentiate. Other organic lesions were mentioned —viz., those of the heart and great vessels, of the eyeball, of the brain and spinal cord, and a similar explanation was offered of the various changes observed. The lecturer concluded his course by turning from the purely physical action of alcohol to its influence on the mental functions. One of the earliest effects noticed is loss of memory, which is often followed by impairment of volition. This is indicated by failure of speech, which indicates the approach of general paralysis. Our lunatic asylums are full of such cases. In explanation of them Dr. Richardson said that "the membranes of the nervous centres of thought and volition have lost the dialysing function. In some instances, though less frequently than might be supposed, the nervous matter itself is modified visibly in texture."

A few words were added on dipsomania, and on *mania a potu*, after which this course of lectures was brought to a close by an allusion to "the solemnest fact of all"—viz., that the mischief inflicted on man by his own act is transmitted to his descendants.

We have dwelt thus at length on the Cantor Lectures of this year, not only because we believe they will be interesting to all our readers, but because they constitute one of the most important contributions to our knowledge of the action of alcohol that have lately been made. Dr. Richardson is a physiologist who speaks with authority, and even if we do not accept all his conclusions, we freely acknowledge their claim to our attention, and are grateful for the lucid manner in which they are stated.

OBSTETRIC WARNINGS.

In his inaugural address at the Obstetrical Society of London, Dr. W. O. Priestley, the new President, gave expression to some most wholesome truths. His position enables him to do this without offence; and we commend to the attention of all practitioners the following remarks:—

> When midwifery forceps became so perfected that in good hands they could be used in most cases with safety both to mother and child, and it became established that, as a rule, the use of instruments need not be deferred so long as heretofore—some zealous practitioners began to throw aside all precautions, to trust as little as possible to nature, and, by way of saving time, to have recourse to instrumental delivery more frequently than desirable. In like manner, one ingenious practitioner, struck by the way in which difficulty in the delivery of some head-presentations was overcome by version, actually proposed to turn in all cases of head-presentation, whenever the least delay occurred in the progress of natural labour, and the passages were sufficiently dilated.
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> In the department of women's diseases, there has from time to time been a tendency to give prominence to some single pathological condition, in such way as to shut out, or at least obscure, other and perhaps equally important affections of the uterus and its appendages. We have had an epoch in which the ovary was assumed to be the prime factor in all uterine ailments; we have had a period when inflammation and ulceration of the os and cervix uteri held the foremost place in uterine pathology; and now we are threatened with a reign of uterine displacements, in which the majority of symptoms of womb-derangement are attributed to flexions and versions of the organ; and, influenced no doubt by current medical opinion, patients, as they present themselves in the consulting-room, appear stricken with an epidemic of displacement, and imagine that all their discomforts are caused by dislocations of the womb, just as, at one time, the sufferers from uterine symptoms generally believed themselves to have ulceration; neither supposition, perhaps, being in accordance with the facts.
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> The promulgation of particular views in pathology, even if erroneous, would lead to little harm, if it did not culminate in hurtful methods of treatment, or tend to lower our *prestige* in the eyes of the public and in those of our brethren who practise in other departments of our profession. But, when theories carried into practice involve proceedings which may possibly be dangerous in their immediate or remote results, or which necessitate frequent vaginal examinations, great circumspection is required in their adoption.
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> Imagine what would be the result if the celebrated professor who first practised division of the cervix for dysmenorrhœa and sterility were to find many imitators without his genius, who began extensively to incise the cervix in most cases of painful menstruation, or where pregnancy was desired! Or picture what would result if it were generally believed that nearly all forms of uterine disorder could only be cured by the frequent repetition of some form of cauterisation; or, again, if a large body of medical practitioners were to become possessed of the single idea that uterine displacement was the root of evil in the majority of female ailments, and that pessaries of some kind were essential to cure both married and single women so suffering!
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> I would beg especially not to be understood as depreciating the labours of some of those eminent pioneers who have done so much to advance our knowledge of uterine disease. It would be in the last degree unjust not to acknowledge how much we are indebted to their conscientious labours; and there is great temptation to give preponderance to subjects which have occupied so much attention, and have cost much pains in investigation. But I am anxious to guard against the acceptance of some single idea or theory, which, if ridden as a hobby, may hinder the advance of a broader and more comprehensive uterine pathology, and perchance lead to meddlesome and mischievous methods of treatment. The mind preoccupied with a sole idea is apt to

search only within the limits of that idea, and to overlook or ignore what may be more important, but beyond and outside it. In an experimental art like ours, practice goes through phases and fashions, in accordance with prevailing principles in pathology and therapeutics; and we are not alone in this respect. The practice of physic has had its phases of bleeding, blistering, and antiphlogistics, followed by a diametrically opposite stimulating method. A mercurial plan of treatment has had its day, and has been succeeded by an antimercurial plan, and so forth.

It has seemed to me, in making a general survey of our ground, and weighing our present position, that the great impetus given of late years, by many admirable workers, to the progress of uterine surgery, has tended to throw the balance somewhat too much over to the surgical side of the scale, and that operative and mechanical methods of treatment have displaced somewhat unduly and hurtfully the medical and psychical considerations in uterine cases.

The current axioms about "meddlesome midwifery" are as true in our times as in former days. Experience also has abundantly proved that even minor operations on the unimpregnated uterus cannot be undertaken with the same immunity as like operations in external surgery. A simple incision, the removal of a polypus, an intrauterine injection, the insertion of an intrauterine pessary—has not infrequently been followed by grave symptoms, which, in some cases, have terminated in the death of the patient, or in the permanent maiming of the genital apparatus by peritonitis.

While the sagacious and prudent gynæcologist should shrink from nothing which will promote the ultimate good of his patient, he should not readily be beguiled into what is new or adventurous, without sufficient proof of its necessity, efficacy, and reasonable security, and without well considering whether some lesser measure will not bring about the same result. Further, he should be conservative of his resources, in diagnosis as well as in treatment. He who, as a rule, employs the uterine sound, without considering whether the whole circumstances are such as to afford *primâ facie* evidence that it is necessary to clear up some doubt, will certainly inflict a large amount of pain and annoyance on his patients, with a minimum of good result. The same observation applies in some degree to the use of the speculum; and, without being bound by any slavish rule on the subject, I may go so far as to say that any method of treatment for uterine affections—always supposing it to be efficient—the more readily commends itself if it do not entail too frequent examinations *per vaginam.*

JABORANDI.

Jaborandi, according to Dr. S. Continho, who took the first specimen to Paris, where the drug has been largely used, is the produce of a shrub which grows in the interior of some provinces in the north of Brazil, the leaves of which somewhat resemble those of the bay-tree. There is now no doubt that the leaves have a powerful diaphoretic and sialogogue action. An account of its physiological effects and a description of the leaf have been published in the *Pharmaceutical Journal* by Mr. Martindale, who first introduced the drug to the notice of English physicians. Mr. Martindale swallowed about fifty grains of the powdered leaf in an infusion, and in fifteen minutes he sweated profusely, and had an excessive flow of saliva. These effects gradually increased. In about half an hour after taking the drug the vision became curiously affected. Distant vision was obscured, although vision for reading or for near objects was quite good. Sixteen ounces of distinctly alkaline saliva were collected in a few hours, and the sweating was so great as to soak the bedclothes. In addition to its diaphoretic and sialogogue effects, jaborandi in a large dose causes tension of the accommodative apparatus of the eye.

Drs. Ringer and Gould, in a long paper in the *Lancet,* detail the results of some experiments which confirm the statements of Gubler, Rabuteau, and others.

In three of their cases the saliva amounted to 20 oz., 22 oz., and 27 oz. respectively. The sweating and salivation continue from two to four or five hours, and simultaneously decline.

Gubler finds the drug increases the bronchial secretion, and he further asserts that it sometimes produces diarrhœa.

Ringer and Gould, in the *Practitioner,* confirm these statements, with the exception of that relating to diarrhœa, and draw attention to the influence of this drug on the temperature and pulse. During the sweating they found that the temperature fell about one degree, the reduction persisting for the rest of the day; and that the lowest temperature was reached about an hour and a half after the administration of the medicine. In one case the fall began immediately, in another case in forty minutes, and in another instance in eighty minutes. In each experiment the pulse became considerably quicker, the increase varying from forty to fifty beats, the beats being quickest in from twenty-five to eighty minutes after the dose. The quickened pulse continued more than four hours. In one lad with intermittent pulse the medicine entirely removed this irregularity. The drug often produced nausea or sickness, which occurred two or three hours after taking it; it also occasioned considerable drowsiness, the lads falling asleep during the observations. The flushing of the face was noticed only when sweating occurred; and in a short time, the flushing was succeeded by marked pallor, accompanied by some prostration. Probably the fall of temperature was due to the perspiration and to increased radiation of heat from an increased quantity of blood flowing to the skin.

M. Albert Robin points out that, in addition to the sweating and salivation, the lachrymal and nasal secretions are increased, and asserts that before and during the sweating the temperature rises more than from 1° to 2° F., and then becomes normal; and that after the sweating the temperature falls more than from 1° to 2° F., and the depression lasts for a day or two. Sphygmographic tracings taken at different stages of the experiment proved that during sweating jaborandi produces very notable diminution of vascular tension. After the cessation of the sweating the pulse was much lowered.

Drs. Ringer and Gould formed their last conclusions (*Lancet*, Jan. 30) on thirty-seven careful observations: twenty on adults, from twenty to forty-five; and seventeen on children, between three and ten years of age. To the adults they gave sixty grains; to the children thirty, and sometimes sixty. They conclude that some of M. Robin's statements are inaccurate. Thus, curiously enough, children are very little affected by this drug. They administered generally thirty, sometimes sixty grains, giving both the solution and the dregs; and yet this dose often failed to produce any effect. In two cases only was the sweating abundant; in eight it was slight—in most, very slight, making the skin only a little moist; and in seven cases it excited no perspiration. Salivation was generally absent, and never more than to make the mouth rather moister than usual. There was very little flushing of the face, and this occurred only when perspiration was induced. The pulse was but slightly increased in frequency, from ten to sixteen beats, and this occurred only when the remedy acted on the skin. When the pulse was quick (and several of these children were convalescent and weak) the pulse was still less influenced, and sometimes even fell. When the skin was rendered moist, the temperature generally fell, the fall varying from 0·6° to 2° F. In eight of these cases it is noted that the child vomited, usually two hours after the administration of the medicine, but sometimes sooner. Occasionally the vomiting was repeated three times. When the vomiting was long delayed none of the dregs of the medicine were rejected. Many of the children were sleepy during the stage of depression. In no instance were the bowels affected, nor did the medicine excite any cough.

In the twenty observations made on eighteen adults, the perspiration in every case but two was most profuse, and in these exceptional instances it was free. It began in about ten minutes, and in one instance only was delayed for an hour. Salivation was absent in two cases only; in three cases it was slight; in the rest profuse, amounting in one experiment to 27 oz. In one case only the pulse was unaffected, though there was marked perspiration. In the rest the pulse was quickened from 12 to 40 beats, the average being 20 beats per minute; the average increased frequency lasting two hours and a half.

The temperature was taken in nine cases. In every instance it fell during the sweating, the fall varying from 0·4° to 1·4°, the average being 0·9°, and lasting from one hour and a quarter to four hours and a half, then reaching the point observed before the medicine was given. In one instance only did the temperature rise, and then only 0·4°, the rise lasting a very short time. In half the cases, slight cough due to increased bronchial secretion was noticed, but was always slight. In no instance did the medicine relax the bowels, so that its action on the intestinal mucous membrane must be slight. In one-half the cases the patients became decidedly sleepy, this occurring during the pallor, one, two, or three hours after the administration of the drug. A sensation of sickness, and sometimes decided nausea, occurred in two-thirds of the cases. In several cases the sight was decidedly affected.

Mr. Martindale prepared for these observers an extract dissolved in glycerine, which they introduced into one eye of thirty-one persons. In nineteen cases the pupil became decidedly contracted, the amount of contraction varying, in some being slight, in others reduced by one-third, in two instances to one-half. The pupil acted sluggishly in eleven cases. In a few hours the contracted pupil regained its natural size; but in one case the contraction was noticed twenty hours after the application. In eleven cases complaint was made of pain over the pubes, generally accompanied by a strong desire to pass water, which afforded relief. A good deal of trembling, especially of the upper extremities, followed in two instances after the administration. One man complained of much throbbing of the head the day following the experiment. Many patients complained of feeling alternately hot and cold, or chilly.

Drs. Ringer and Gould proceed to contrast the action of jaborandi with that of belladonna, to which it seems an antagonist: thus, belladonna checks the secretion from the skin, the salivary glands, the mucous membrane of the nose, bronchial tubes, stomach, and intestines, and dilates the pupil and contracts the arterioles; jaborandi, on the other hand, increases enormously the perspiration and saliva, and, in a much less degree, the secretion from the mucous membrane of the nose, the bronchial tubes, and the stomach and intestines. Robin asserts, moreover, that it lowers arterial tension, probably by paralysing the vaso-motor nerves, and thus causing dilatation of the arterioles. Belladonna excites delirium, whilst jaborandi often produces sleep. On three occasions, to three different men, these writers administered sixty grains of jaborandi, and when the perspiration and salivation were profuse they injected subcutaneously $\frac{1}{100}$ of a grain of atropia. In five minutes the perspiration and salivation were considerably diminished, and in from ten to twelve minutes the skin was preternaturally dry and the salivation was checked, but in one case continued a little after the cessation of the perspiration. A lad was admitted into University College Hospital poisoned by atropia, having taken one grain five hours before. His tongue and mouth were quite dry. A quarter of an hour after taking thirty grains of jaborandi his mouth became much less dry, and in an hour he was sweating freely and his mouth was naturally moist.

Belladonna arrests the secretion of milk. Thirty grains of jaborandi were given to a woman thirty-eight years old, confined of her ninth child four months previously, but who had very little milk. In ten minutes the drug produced its usual symptoms; in half an hour her breasts, which previously were flaccid, became tumid and distended, and on pressure yielded considerably more milk. In forty minutes the increase was still more marked, jetting forth in four or five streams. In eighty minutes the milk was less abundant, though considerably more so than before the experiment, which was confirmed by another case.

In some of their effects, however, jaborandi and belladonna agree. Thus, both flush the face and quicken the pulse; and both affect children much less than adults. Belladonna quickens the pulse by its paralysing influence on the pneumogastric, and possibly by stimulating the sympathetic nerves. There is no evidence that jaborandi paralyses the pneumogastric, or stimulates the sympathetics supplying the heart, but M. Robin has shown that it lessens arterial tension, probably by dilating the arterioles; and it is well known that dilating the arterioles, and thereby allowing the blood to pass more quickly from the arteries to the veins, quickens the heart beats. Hence it is very probable that the quickening of the pulse by jaborandi is due to its influence on the arterioles; and thus, instead of affording an instance of similarity of action between these two drugs, affords another example of their antagonism, for belladonna contracts the arterioles.

It is satisfactory to learn that in several cases a tincture from the leaves, and in one case an extract made from the tincture, were equally effectual as an infusion with the dregs; also that a strained infusion is equally efficacious as one with the dregs, from which we may conclude that the active principle is not the oil, so abundant in these leaves. In three cases an infusion made from the bark of the stem, giving also the dregs, proved active, though it appeared to excite more vomiting and to cause more depression than the preparations from the leaves.

Mr. John Tweedy, finding the statements as to the effect of jaborandi on the vision conflicting, made a set of experiments on himself, from which he concludes that jaborandi locally applied to the eye causes, (1) contraction of the pupil; (2) tension of the accommodative apparatus of the eye, with approximation of the nearest and furthest points of distinct vision; (3) amblyopic impairment of vision from diminished sensibility of the retina. These effects, however, do not last long. In his case the approximation of the near and far points of distinct vision declared itself in a quarter of an hour, and reached its maximum in about forty minutes. It then gradually subsided, and entirely passed off and the eye resumed its normal state in about an hour and a half.

It seems strange that when Drs. Ringer and Gould found one drachm of the drug so powerful, they did not experiment with smaller doses — especially as some of the patients were weak. This dose seems to have been everywhere accepted, but we would put forth a caution respecting it. French experimenters have found, besides its extreme activity, it has a very depressant action on the heart. If thirty grains of ipecac. produce vomiting, do we not employ smaller doses? Why should jaborandi be recklessly given in large doses?

ABOUT BOOKS.

Commentary on the British Pharmacopœia. [By Walter G. Smith, M.D., F.K.Q.C.P., Assistant Physician to the Adelaide Hospital, 1875. London: Smith, Elder, and Co.

This is a book to cheer the heart of the deligent student, but which the idle one will be sure to avoid. It differs from all other class-books of materia medica in several particulars. Although professing to be a commentary on the British Pharmacopœia, it contains brief notices of those non-official drugs which promise to prove permanent additions to our stock of remedies. The text of the Pharmacopœia is not reprinted in this work, thus considerable space is gained and much needless repetition avoided; space is further gained by the brief, though sufficient manner in which the natural history of the organic materia medica is dealt with; thus all botanical minutiæ of exotics are omitted, the details being given of indigenous plants. On this course we heartily congragulate the author, as we do also on the full treatment of the physical and chemical properties of drugs in daily use. It is, in fact, in the chemical department that our author is at his best, and, in our opinion, this part of his work is superior to that of any other text-book of materia medica. To each metal there is prefixed a general introduction on its chemical relations and therapeutic uses; after which all preparations follow in alphabetical order. Under each of the principal metals the author gives a kind of pedigree of its preparations, showing at a glance their mutual relations; these novel and interesting genealogical tables exhibit the parent substances, printed in heavy type, while the compounds which yield no direct derivatives appear in small type.

This original mode of arrangement is sometimes very striking, as for example, in the table of our arsenical compounds, the mention of which reminds us that the author's account of arsenic and its preparations, skilfully compressed within eight pages, is one of the best we have met with. In this, and in the case of other important drugs, the therapeutic uses are simply stated. So much so, indeed, that we almost wish the author had treated the therapeutics of the majority of drugs at greater length.

The accuracy of this work is exhibited in a variety of ways, and the student who masters it will have little to unlearn. In fact, the only misleading statement we have met with is on page 137, where Dr. Smith says, "Weak solutions (of nitrate of silver) are liable to cause much irritation in the larynx: strong solutions do not." We feel sure Dr. Smith has not tested this practically, and though often repeated, the assertion is, we believe, erroneous. Perhaps it would have been as well had the doses been more generally given. We find on page 128, speaking of medicated waters, Dr. Smith says, "the dose of any of them, except laurel-water, for an adult is ℥j. to ℥ij;" but he does not mention the dose of the exception, by far the most important of all, nor does he allude to it under the article on laurel-water itself. He does, however, there make a remark with which we heartily agree, viz., "on account of its uncertain strength and feebleness at best, it should not be allowed to take the place of the definite dilute solution of prussic acid, and its introduction into practice at all is to be regretted."

From numerous practical wrinkles distributed through this work, we may mention one which many of our readers may be glad to meet with: it relates to solutions for hypodermic injections, which are so apt to spoil. Dr. Smith says, that if prepared with pure camphor-water they will keep much better. We can verify this, but any reader who tries the plan must not forget that this "pure camphor-water" must itself be prepared with pure distilled water.

Turning over the leaves of the book we came upon the article on ergot, on which we were writing in the Doctor last month, and were gratified to find how completely in this, as well as in other cases in which we have tested it, Dr. Smith has assimilated the most recent reliable contributions to our knowledge. He observes that, "broadly speaking, ergot is a stimulant to unstripped muscular fibre generally," and then goes on to show its most important use; after which, referring to its power of contracting the arterioles, he recognises its use in purpura and in hæmorrhage, as well as its indication in paralysis depending upon congestion of the spinal cord, and its contra-indication in cases arising from an opposite condition, as pointed out by Dr. Brown-Séquard.

Among the preparations of iron, we have been struck with the admirable account of the two solutions of the perchloride, which is exact as well as succinct, while it contains several points not to be found in many textbooks; thus we are told in a note that crystals of hydrated ferrous chloride can be procured by evaporating the solution of the iron-wire in excess of hydrochloric acid formed in the first part of the process. Among the characters and tests of the liquor it is stated that in aqueous solution it is persalt of iron, but when mixed with spirit, as in the tincture, it is partially reduced to ferrous chloride. Moreover chlorinated ethereal bodies are gradually formed in the tincture by the reaction of the hydrochloric acid and spirit. Further crystals of hydrated ferric chloride may be obtained by the evaporation of the liquor. These crystals are reddish and rather deliquescent, and we have ourselves used them dissolved in distilled water as preferable to either liquor for local application.

In the article on mercury, Dr. Smith has availed himself of Dr. Scoresby Jackson's excellent note-book for a sketch of its general therapeutical effects, but each of the numerous preparations is detailed by Dr. Smith in his best manner.

The origin of the names of most of the drugs is given in foot-notes, and we may remark, that although Greek and Latin are in the ascendant, we have encountered terms said to be derived from Hebrew, Arabic, and Hindostanee, while the almost comic origin of the word glonoin is given, viz., from the initials of glycerin, oxygen, and nitrogen.

This horrible explosive, the nitro-glycerine, of commerce, has been proposed for medicinal use in neuralgia and spasmodic affections, but as Dr. Smith remarks, it has caused very serious symptoms when given even in minute doses—1-40th of a drop. We have said enough to show that this commentary will take high rank as a book of reference as well as a student's manual. It reflects the highest credit on the learning and acumen of the author. To it future writers on materia medica will turn with confidence, and will not be disappointed; whilst any diligent student would do well to make it his text book, and any practitioner will find it a valuable addition to his library.

Cutaneous Medicine and Diseases of the Skin. By H. S. PURDON, M.D. London: Baillière, Tindall, and Cox. 1875.

THE author of the above extremely practical work is well known to our readers. Many new and important features are contained in this book, especially as regards the treatment and rapid removal of certain forms of chronic skin affections. No pains have been spared by the author in searching for information from every trustworthy source. Rather than give any lengthened notice, we recommend our readers to purchase the volume and persue it for themselves; and believe that they will not be disappointed.

AT THE SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JANUARY 25TH, 1875.

C. J. B. WILLIAMS, M.D., F.R.S., President, in the Chair.

ON THE TEMPERATURE OF PHTHISIS PULMONALIS AND ON THE VARIOUS CONDITIONS INFLUENCING IT.

By C. THEODORE WILLIAMS, M.A., M.D., F.R.C.P.

THE author, after briefly reviewing the labours of Jochmann, Lebert, Küchenmeister, Ringer, Wilson Fox, and others on the thermometry of phthisis, proceeded to demonstrate the reasons why hitherto no definite laws governing the rises and falls of the temperature in the disease had been discovered; the main point being the comparatively few observations taken *per diem*, and the acute and exceptional character of the cases under observation. A clinical and pathological account was then given of one hundred and four consumptive patients, inmates of the Brompton Hospital, and, therefore, subjected to the same equable atmospheric and hygienic conditions, in all of whom the temperature was taken at least five times, and in many of them seven, ten, and twelve times daily, for periods varying from seven to thirty days. The patients were sixty-three males and forty-one females, embracing all acute and chronic forms of the disease except acute tuberculosis. The temperatures were taken for the most part in the axilla, and in some instances, for comparison, in the mouth, by the clinical assistants and by Dr. Williams himself, with thermometers manufactured by the best makers. These observations amounted in number to between four thousand and five thousand. To ascertain more fully the exact thermometrical phenomena of the disease, and especially the night changes, in twelve cases an hourly record was carried out for twenty-four consecutive hours, and in some instances it was repeated for a second similar period. The state of the pulse, respiration, skin, bowels, and urine was likewise noted; as also the time of meals and the amount of food taken. The cases are classified in the following manner, according to stages: 1. First stage, active (where formation of tubercle was taking place); 2. First stage, quiescent; 3. Second stage, that of softening; 4. Third stage, active (with increasing excavation and tuberculisation); 5. Third stage, quiescent (or chronic cavity). The results of the analyses under these headings were then given, and the temperature at each of the hours of observation, viz., 8, 10, and 11 a.m., 2, 5, 8, 10, 11, and 12 p.m., as also the intermediate day temperatures occasionally taken and the night observations. The media, maxima, and minima of each stage were stated, and tables and charts were exhibited to explain more fully the method of calculation and the results arrived at. The influence of the states of consolidation and of tubercle formation, of softening and of excavation, as well as extension of disease, on the temperature, were dwelt upon, and illustrative instances of each given; the pathological state being proved in many cases by post-mortem examinations. The chief conclusions as to the diurnal temperature of the disease were as follows. In a large number of chronic phthisis cases, the temperature is normal or subnormal, sometimes falling to between 93 deg. and 94 deg. Fahr., a continuity of low temperatures being most marked in the first and third quiescent classes. In pyrexial cases, the temperature is seldom very high, 104.6 deg. Fahr. being the highest recorded. In the majority, a marked rise takes place after 2 p.m., and a rapid fall occurs after 10 p.m., which continues throughout the night, until its minimum, sometimes as low as 94 deg. is reached before 7 a.m.; a slight recovery is then perceptible, the normal being seldom, however, attained before 9 or 10 o'clock. This temperature wave may be shifted a few hours, the rise taking place later in the afternoon, the high temperature being maintained farther on into the night, and the lowering consequently delayed by some hours. Any continuous rise of temperature is followed by a certain amount of collapse, thought not always to a corresponding degree. The disease in all its stages shows the post meridian rise and the nocturnal fall, with the early morning collapse temperatures; and that the latter is a characteristic of phthisis is proved by Dr. Williams' observations on a healthy man (placed under similar conditions to the consumptive patients), in whom the night temperatures did not fall materially below the day ones. The first stage exhibits a more gradual rise and fewer extremes of temperature than the third. In the third stage the temperatures are the highest and the lowest, both afternoon pyrexia and nocturnal collapse being most strongly marked, the one having been known to rise to 104 deg. Fahr., the other to sink to 93 deg. Fahr., thus exhibiting a range of 11 degrees. The second stage shows intermediate thermal features between the first and third stages, active. Tubercle may form, and the various processes of lung-disorganisation may proceed uninterruptedly without apparently causing any considerable rise of temperature, and may even be accompanied by a subnormal temperature, this being probably due to the collapse influence on the constitution. Many of the variations in the phenomena are to be explained by the formation of pus, the liquefaction of adjoining tissues, the imprisonment of the purulent and caseous compounds, and their subsequent evacuation by expectoration. Phthisis has a distinct temperature course, marked, on account of these changes, by great intermissions; but the idea that in each case it depends on individual idiosyncrasy is founded on imperfect observation. In all cases, two principal agencies appear to determine the temperature course : first, an excessive action of the natural processes by which the body heat is maintained ; secondly, the influence of collapse, proceeding from the well marked weakening of the constitutional powers in phthisis. These two agencies are continually struggling for the mastery, and the result of this conflict is the temperature course of the disease. The influence of the first is seen in the rise in the afternoon and evening well marked in the active forms of all three stages, and regularly recurring day after day for long periods ; the influence of the second was shown in the rapid nocturnal fall and low temperatures of early morning ; the collapse influence was also seen in the subnormal day temperatures, occasionally occurring in all stages of the disease, and even where the active processes of lung tuberculisation, of softening, and of excavation may be taking place. It is, however, chiefly noted in the quiescent forms of the first and third stages. When low temperatures accompany active forms of the disease, it is probable that the collapse influence is stronger than the pyrexial, and, therefore, masks it. When the chart shows occasional fitful variations, these agencies are, perhaps, evenly balanced, and may alternately prevail, as is witnessed in the end temperatures of consumption ; and to these derivations, noticed in advanced cases, may be ascribed the prevailing, but erroneous opinion of phthisis having no definite temperature courses. The author concluded with a careful comparison of weights of the above patients, with their temperatures, and made some deductions therefrom.

Dr. **Wilson Fox** for some years had attempted such records, but had not made an analysis of the results. It appeared that the highest evening temperature was at 5 p.m.; but there seemed to be this difficulty, that on no two days at the same hour was the temperature alike. For nstance, the temperature at 8 a.m.—the lowest—might be in successive days 97 deg., 98 deg., 99 deg., and 100 deg.; and, at 2 or 3 p.m., it might be 101 deg., 102 deg., or 103 deg. These facts must influence our ideas as to treatment; they must show that the use of therapeutic agents (excepting the cold bath) must be guided by the vitality of the patient rather than by the thermometer. Phthisis was one of the exhausting diseases; chronic suppuration was another. In a case of chronic suppuration following delivery, the extreme variation of temperature was 10 deg. He believed that Dr. Burdon Sanderson regarded great variations in temperature as indicative of suppurative fever. He thought that it was not the existence of pus, but the process of its formation, that led to pyrexia. The more inflammatory processes tending to destruction took place, the more frequent were the variations of temperature. There was, however, an exception to this in pneumonia. It was not yet possible to give the reasons for the variations in individual cases ; but Dr. Fox believed that at some future day this would become possible.

Dr. **Douglas Powell** objected to Dr. Williams' view of the unity of phthisis in all its forms. When cases of all kinds were mixed, the mean results obtained were less valuable than they would be if a classification were made. The great fact which had come out was the great fall of temperature in the early morning hours ; and this would probably be of much importance in treatment. This fall must be due, he thought, to exhaustion ; it might, perhaps, be avoided by feeding the patient at night. He asked whether Dr. Williams had made any observations as to the effect of food in modifying the fall of temperature. It had been suggested that the best plan of preventing night-sweats was to feed the patients.

Dr. **Drysdale** had observed, in the North London Hospital for Consumption at Hampstead, that, for a month or two at a time, almost every patient increased in weight, no matter what their temperature might be. He agreed very much with Dr. Williams in his objections to Niemeyer's doctrine of the varieties of phthisis. The only variety that he sometimes met with was one which he attributed to syphilis. He thought that, in miliary tuberculosis, the temperature would be high in proportion to the number of tubercles.

Dr. T. H. **Green** did not think the pyrexia in the third stage was due to disintegration and softening, but to the presence of the first stage of the disease in some other part of the lung. He asked whether the thermometer would indicate the occurrence of an infective process in phthisis.

Mr. **Herbert Page** said that the curves of temperature in the first stage of phthisis resembled what was seen in surgical cases, where the occurrence of suppuration was marked by similar variations.

Dr. **Leared** asked whether the observations on temperature would assist in the diagnosis of the stages of phthisis.

Dr. **Symes Thompson** said it had been stated that phthisical patients presented idiosyncrasies which rendered thermometric observations futile as regarded treatment. He thought that it had been proved that quinine was a powerful agent in keeping down a high elevation of temperature ; but how far real good was done by preventing a rise of temperature was another question.

Dr. **Curnow** had taken the temperatures of several of Dr. Thompson's patients in the Brompton Hospital by day and by night. There was great difficulty in finding the averages, although the temperatures touched at certain parts of the day. In some cases complicated with diabetes there was no rise of temperature. As to the influence of the formation of pus, similar fluctuations of temperature were observed in cases of softening of the brain after embolism. The same was the case in separation of fibrin in the blood, leading to metastatic abscesses.

Dr. **Theodore Williams**, in reply, stated that, though it was true that it had been known that morning temperatures were lower than evening in consumption, the exact temperature course, with its variations, was now depicted for the first time, with its remarkable afternoon rise, and still more striking nocturnal fall. As to irregularity of temperatures taken at the same hour, this was not more the case in phthisis than in health, where the observations varied considerably ; but variations of this kind in phthisis were sometimes to be explained by a shifting of the whole temperature course by an hour or so. He was strongly of opinion that the chart of the third stage (active class) was typical of suppuration ; and various kers conclusion by adducing evidence from other suppurative diseases, medical and surgical. The low temperature of the early morning was due to exhaustion, and might possibly be avoided by feeding the patient through the night ; but his observations on this point were not yet complete. Whether the local infective process in the lung from a caseous centre could be detected by temperature, he could not tell ; but, in several instances where general infection of the system had taken place, it had been characterised by a chart resembling that of pyæmia. He was aware of his classification being rather too simple ; but, the results of investigations on this point having been confirmatory of the unity of phthisis, he preferred a few distinct classes, with well marked features, to a number of small divisions hardly to be distinguished from each other. The thermometer might sometimes detect the formation of tubercle before physical signs did ; but, on the other hand, tubercle might form without any rise or fall of temperature. The best hours for clinical records in phthisis were : for the low temperatures from 3 to 6 a.m. ; for the high, from 5 to 8 p.m.

MEDICAL OPINION.

VIVISECTION.

The following communication was read at the Medico-Chirurgical Society on the 9th ult., and we believe copies have been sent to all the medical societies and to other bodies :—

Sir,—On Monday last a memorial, signed by many distinguished persons, was presented by an influential deputation to the committee of this Society, supported by papers which allege that experiments on living animals are frequently, if not regularly, performed at the various schools of medicine and physiology, hospitals, and other similar institutions of London, for the purpose of discovery, of demonstration, and of illustration.

A special committee has been appointed to deliberate on the statements and proposals of the said memorial and papers. I am desired by such committee to ask you to be good enough to do them the great favour of permitting me, with two other gentlemen, to be present as mute spectators on the occasions alluded to when operations on living animals are appointed to be performed at your institution, in order that we may report the proceedings to them.

The committee trust you will appreciate the nature of this application, which they think it their duty to make instead of resorting to other usual modes of acquiring information.

I have the honour to be, Sir,
Your obedient servant,
January 29th, 1875. John Colam, Secretary.

The reply of the Medico-Chirurgical Society was as follows:—

Sir,—We are directed by the Council of the Royal Medical and Chirurgical Society to inform you that the Society is not at present engaged in or contemplating any experiments involving vivisection. We are also to add that if the Society should undertake any further scientific investigations rendering such processes necessary, they would certainly decline the presence or interference of any unqualified witnesses.

We are, Sir, &c.,
E. Symes Thompson, M.D.
J. Cooper Forster.

The *Lancet* says: It is difficult to know whether to admire most the apparent guilelessness of the circular letter, or the concealed object for which it has probably been written. Were we to suppose that the letter is to be taken *au sérieux*, and that the Society carries out its work in this manner, it is not to be wondered at that complaints should be made of its inefficiency to do its proper work. For, in the eyes of the Society, as shown by the Norwich incident, vivisection is criminal, and its performers to be prosecuted with as much vigour as those who treat cattle or domestic animals with gross cruelty. We presume that the secretary sits down and writes a polite circular to drovers who overdrive their cattle, &c., requesting them to favour the Society by stating when they intend to overdrive or starve their cattle, in order that the officer of the Society may be in attendance.

But we suspect that the real object of the circular is to get as many refusals as possible to the absurd request, and then to print them and circulate them as proofs that vivisection is extensively practised, and that the operators preserve the utmost secrecy. If all the bodies addressed are as innocent as the Medico-Chirurgical Society of any such doings, and return equally ambiguous replies, Mr. Colam will have enough work cut out for his officers whom he employs in the "usual modes of acquiring information."

The *Medical Press and Circular* says: The Society for the Prevention of Cruelty to Animals is making a great hubbub about the supposed cruelties of vivisection in our medical schools, and it appears by a circular issued to the hospital authorities a special committee has been appointed to watch over the doings of the teachers of physiology. We venture to suggest to this vigilance committee a wider and more useful field in which to display their humanitarian interest on behalf of suffering animals—namely, in trying to put down the useless and cruel sport of shooting tame pigeons, and the very needless cruelties of the hunting-field. It is quite possible that a Royal Society for the Prevention of Cruelty to Animals may in time succeed in convincing gentlemen that the hunting harmless hares and half-tamed foxes to death is attended with a good deal of cruelty. At all events, if success attend the Society's efforts in this direction the public will be spared the pain and scandal attached to such deaths in the hunting-field as that of the Rev. C. Wilkinson, a clergyman of 79 years of age, who, it appears from the newspapers, was thrown from his horse while following the Bramham Moor hounds and killed on the spot. It is perfectly shocking to think that an aged clergyman should have met his death in the pursuit of a cruel sport.

The *British Medical Journal* says: If the Society for the Prevention of Cruelty to Animals cannot trust physiologists and physicians to report faithfully their own proceedings, it is a little surprising that they should expect medical bodies to consent to have their proceedings publicly reported and interpreted for them by Mr. Colam and his companions. If truthfulness, intelligence, and humanity have really fled from the bosoms of medical men and medical societies, the presence, as "mute spectators," of Mr. Colam and his companions would be a very insufficient remedy; of their qualifications as reporters on such a subject, it is unnecessary to speak.

ETHER v. CHLOROFORM.

The *Lancet* says: The dangers of anæsthesia, so far as we understand them, are death beginning at the lungs, and death beginning at the heart. When a rabbit or other small animal is killed by chloroform, its death begins at the lungs. It perishes by asphyxia; and, after apparent death, which would pass into real death save for the aid of art, it may, as Dr. Richardson has shown, be easily resuscitated. The same condition has more than once been produced in the human subject, and Ziemssen and others have recorded cases in which, by faradisation of the phrenic nerve, or by other methods of maintaining respiration, life has been restored rather than preserved. We think it probable that death beginning at the lungs might be occasioned by ether, and that, if properly treated, it might become death real and irretrievable. All such cases, however, would probably be remediable if taken in time; and would require nothing but the methodical conduct of artificial respiration. With chloroform and bichloride of methylene there is also the danger of death beginning at the heart, by a sudden paralysis over which the respiration exerts no influence; and it is probable that such cases are always fatal. From this risk it may, perhaps, be said that ether is wholly free; for there is a remarkable concurrence of testimony with regard to its power to sustain the heart, and also, by maintaining dilatation of the capillaries, to prevent the heart from being overloaded by blood driven in from elsewhere. We should hesitate to admit with the Americans that ether is absolutely safe; but we are prepared to believe that any small dangers which may attend upon it are under the control of vigilance and good management. With regard to chloroform the same cannot be said; and, as long as its employment is continued, it will continue to claim its occasional victims. It is surely incumbent upon every surgeon to guard the life of his patients and to keep himself in the right, by the systematic employment of the anæsthetic which, so far as knowledge now extends, is at once as effectual as any other and more safe.

IN THE LABORATORY.

INCOMPATIBILITY OF CORROSIVE SUBLIMATE AND MURIATE OF MORPHIA.

A physician lately proposed a solution for hypodermic use containing eight grains of mercuric chloride and four grains of muriate of morphia in an ounce of distilled water—a sparingly soluble double chloride of mercury and morphia crystallised out of the solution. The addition of over forty per cent. of glycerine to the menstruum failed to hold the salt in solution. Even when not incompatible, it is not well to mix remedies for hypodermic use.

COD-LIVER OIL WITH QUININE.

Twelve years ago, Dr. Attfield called the attention of the Pharmaceutical Society to the fact that the natural alkaloids combine with oleic acid to form oleates which dissolve in oil. The suggestion has not, however, proved of much practical use in pharmacy as yet.

In the *Pharmaceutical Journal* (Feb. 13th) Mr. M. H. Stiles, of Hull, suggests that this fact might be turned to account in preparing cod-liver oil with quinine. Having lately had occasion to prepare some cod-liver oil with quinine, and found the product, as prepared by the usual process, unsatisfactory, the idea occurred to him of preparing the oleate and dissolving that in the cod-liver oil. The result was perfectly satisfactory. He says that the preparation had the characteristic taste of quinine and cod-liver oil, the oleic acid from its small amount not being perceptible.

The preparation may be made as follows:—

Take of Sulphate of Quinine	60 grains.
Diluted Sulphuric Acid . . .	1 fluid dram.
Solution of Ammonia . . .	a sufficiency.
Distilled Water	a sufficiency.
Purified Oleic Acid	1 fluid ounce.
Cod-liver Oil	29 fluid ounces.

Dissolve the quinine in the diluted sulphuric acid mixed with 4 oz. of water, add a slight excess of ammonia, stir well, transfer the whole to a calico filter, and after carefully washing the precipitate, press it between folds of bibulous paper and dry by the heat of a water-bath. Dissolve the quinine thus obtained in the oleic acid by the aid of a gentle heat, mix the solution whilst warm with 5 oz. of cod-liver oil also warm, strain through cotton wool or filter through paper if necessary, then add the remainder of the oil. The product should measure 30 fl. oz. ; each table-spoonful (fl. ℥ss) contains oleate of quinine equal to one grain of sulphate.

NOTES, NEWS, AND GOSSIP.

SPHYGMOGRAPHY RUN MAD.

M. CYON, an eminent French physiologist, suggests the application of the sphygmograph for the purpose of obtaining the sentiments of a man's mind. As the tracings obtained in different forms of disease, pneumonia, typhoid fever, &c., show the nature of the cardiac movements, so distinct tracings might be obtained for emotions—as fear, guilt, and the like. He therefore proposes to use the instrument on persons suspected of being guilty of some crime, and by recounting the details of the act, and comparing the tracings before and after its recital, the expert or judge might be able to form an opinion as to whether the accused had any part in the crime. The proposal is an ingenious one, but its utility is very doubtful ; nevertheless, the general idea advanced by the author is worthy the attention of psychologists.—*Canada Lancet.*

DARWINISM IN THE KITCHEN.

I was takin' oft my bonnet
One arternoon, at three,
When a hinseck jumped upon it
As proved to be a flea.

Then I takes it to the grate,
Between the bars to stick it ;
But I hadn't long to wait
Ere it changed into a cricket,

Says I, "Sure*ly* my senses
Is a-gettin' in a fog !"
So to drownd it I commences,
When it halters to a frog.

Here my heart begun to thump,
And no wondor I felt funky ;
For the frog, with one big jump,
Leaped hisself into a monkey.

Then I opened wide my eyes,
His features for to scan,
And observed, with great surprise,
That that monkey was a man.

But he vanished from my sight,
And I sunk upon the floor,
Jest as missus, with a light,
Come inside the kitching door.

Then beginnin' to abuse me,
She says, "Sarah, you've been drinkin' !"
I says, "No, mum, you'll excuse me,
But I've merely been a-thinkin'.

"But, as sure as I'm a cinder,
That party what you see
A-gettin' out o' winder,
Have developed from a flea."

Harper's Bazaar.

AN ANTIDOTE TO CHLOROFORM.

DR. SCHULLER has discovered that the nitrate of amyl quickly removes the effects of chloroform on the vessels of the pia mater, and that even in cases of advanced narcotism from the latter drug it rapidly relieves the dyspnœa and laboured respiration, restoring the strength of the pulse, and the reflex excitability. This discovery may prove of much practical value where chloroform continues to be the favourite anæsthetic.—*New York Medical Journal.*

SCIENTIFIC GRANTS.

AT the last meeting of the Committee of Council of the British Medical Association the following grants were made. Are they not too extravagant out of a paltry income of £8,000 or £9,000 ?—Mr. Hicks, Cambridge—Researches on Alcohol, £50 ; Dr. P. M. Braidwood and Mr. Francis Vacher, Birkenhead—The Life History of Contagion, £15 ; Dr. R. Caton, Liverpool—The Natural Electric Currents of the Brain, £20 ; Dr. J. M. Fothergill, London—The Effect of Certain Agents upon the Circulation, £10 ; Dr. McKendrick and Mr. James Dewar, Edinburgh—Physiological Action of Chinoline and Pyridine Compounds, £25 ; Dr. Mahomed, London—The Pathology of Albuminuria, £20 ; Dr. Munro, Cupar Fife—An Antidote for Chloroform, £5 ; Dr. W. H. Spencer, Clifton, Bristol—The Action of Uranium Salts in Diabetes, £20. The grants in all amount to £165. Certain other applications have been referred to a Sub-Committee, with power to appropriate the balance of the sum of £200 voted, if the particulars furnished by the applicants are satisfactory.

RHEUMATIC MARKINGS UPON THE TEETH.

IN the *Nashville Jour. of Med. and Surg.*, Dr. L. G. Noel attributes to chronic rheumatism the condition of the teeth treated of in dental works as "spontaneous abrasion," and by some thought to be due to mechanical causes alone. He considers the abrasion is caused by the acid secretion of the mouth, and asserts roundly that "there is nothing more certain than that this spontaneous abrasion of the teeth is an index to the rheumatic diathesis. We have seen hundreds of cases to substantiate this truth, and while writing the above, a case came under our observation, where, in the mouth of a man, aged 55 or 60 years, the labial surface of the incisor teeth presented deep grooves at their necks. Upon inquiry we learned, as we expected, that he was an habitual sufferer from rheumatism." What will the dentists say to this ?

CORRESPONDENCE.

ANÆSTHETICS.

TO THE EDITOR OF THE DOCTOR.

SIR,—In the *résumé* of my article on anæsthetics, published in your January number, you give as one of my precepts, "Never to use a small vial from which a small quantity can be dropped, and that quickly."

Your readers will see how readily the mistake might occur when they read the three rules in connection with the foregoing clause.

"The result in this case gave some alarm, and taught me—

"1. Never to be in a hurry to effect anæsthesia.
"2. Never to use a large quantity when the patient is nearly influenced.
"3. To use a small vial from which a small quantity can be dropped, and that quickly."

My own little vial is about four inches long and about half an inch in diameter, and graduated, and supplied with a "dropper cork."

Again, you state that Professor Gross "entrusts his assistant entirely with the management of the chloroform." In this my language misled you. So far from doing this the learned surgeon always shares with his chloroformist the responsibility of the case, and upon the first symptom of danger assumes the full command. It is by prompt action at the earliest moments of impending danger that instances of real anxiety so rarely occur.

Many a surgeon, as a compliment to the physician who has invited him to operate, will give the latter the honourable and important office of chloroformist. Not so with Professor Gross. He keeps his own special chloroformist, and often takes him long distances, as he will not expose a patient to so great a danger as might ensue from so potent an agent in inexperienced hands.

Very respectfully,
OSCAR H. ALLIS.

NOTICES.

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TO CORRESPONDENTS.

*** WE beg to thank those gentlemen who have, during the past, kindly furnished us with abstracts of their lectures, communications to societies, contributions to journals or other productions, and to say that such abstracts will always receive attention.

*** Correspondents are requested to write legibly, and on one side of the paper only.

☞ Books for review, exchange journals, and literary communications to be addressed to the EDITOR of THE DOCTOR, at the Office, 20 King William Street, Strand, London, W.C.

THE DOCTOR.

LONDON, APRIL 1, 1875.

Multum in parvo.

MEDICAL AUTHORS AND THEIR ADVERTISEMENTS.

FOR some time past the weekly medical journals have vied with each other in the attempt to put down the practice of advertising medical books in the lay newspapers.

The *Lancet* and the *British Medical*, though always at war with each other, take the same side on this question, which has recently been brought before the Harveian Society by Mr. James Lane, who boasted that he had never written a book—as if that gave him authority to dictate to those who had, how to dispose of their productions. Mr. Lane has written a good many articles in the journals, he holds a valuable hospital appointment, and his sterling worth has become known to the profession and the public in other ways; but he should remember that others as skilful and as learned, with perhaps nothing to introduce them but their pens, and without the same access to the journals as he apparently enjoys, may have equally valuable ideas to make known. If a book or a pamphlet be written at all, how, in these days, is the fact to be made known? Any publisher will reply to such a question—"by advertisements;" and if asked where to advertise, he would say in the *Times*, and the leading literary journals, at least, we judge so by the fact that our leading medical publishers invariably resort to these media to make known the works of which they are the owners. Why should an author who holds his own copyright be forbidden to do that which a publisher does with impunity?

We fully acknowledge the inconvenience that may result from advertising in the same column with quacks, and the loss of dignity to which a man exposes himself by excessive advertising; but the difficulty of drawing the line is, we fear, insurmountable. This is well illustrated by the action of the very journal which instigated the war against medical authors who advertised outside medical periodicals. That very journal, which constantly expatiates on the impropriety of certain medical subjects meeting the eyes of the readers of general newspapers, does not hesitate to placard in the railway stations its weekly table of contents. Could any satire go farther? Does it not suggest the notion that our medical contemporaries are influenced by the desire to drive advertisers to their own columns?

Another journal absolutely rejoices that the echo of the attacks on medical authors has travelled as far as Paris. "It is an ill bird that fouls its own nest," but the *British Medical* does not hesitate to republish the following paragraph from the *Gazette Médicale*:—

> "For some time past, English literature has become enriched by a large number of medical works, of which the object is not always the advancement of science and the search after truth. Many of these works are nothing but touting for patients—a kind of costly but paying advertisement, which their authors allow themselves to put forth in order to attract the attention of the lay public. The English are more inclined than the French to this kind of publicity, which is above the means of the French practitioners, who are generally not by any means rich at the outset of their careers, whilst their English brethren are frequently more in want of patients than of means. Thus every day we receive from them a large number of books for criticism, which we take good care neither to read nor to analyse, and of which the first page sufficiently shows the idea which has inspired the composition of the book."

It might have been supposed that an English journal would prefer to inform French writers that our medical literature is not all of this class, which indeed forms but a small proportion. Perhaps, however, this was hardly to be expected from a journal which has evinced its profound ignorance of the matter by stating that neither in Europe nor America was such advertising permitted, the fact being that in both, medical men actually advertise their names and addresses, and often their specialties, in the form of a "card"—a method which saves the trouble of writing a book and the expense of printing it.

We beg to suggest that Frenchmen, as a rule, are proverbially innocent of any knowledge of English customs, and care nothing for English opinions. Otherwise we might tell them that it is not considered good taste here to condemn books "which we take good care neither to read nor to analyse."

It is perhaps also well to make known that in other countries publishers generally undertake the risk of the books they publish, and pay the authors for their work, while in England, alas! medical publishing has been reduced to a mere commission agency—and a very expensive one it generally proves to be, to the author.

We never could understand why medical authors should consent to enrich their publishers whilst impoverishing themselves. The whole system is bad, and we fear will never be remedied until the relations of medical authors with their publishers are more nearly assimilated to those of other literary men, and this will scarcely be accomplished until some of the great general publishers bid for the support of medical writers, or until some of the latter, whose position is unassailable, venture to defy Mrs. Grundy and transact their own business, without the intervention of a book broker. Such a course would be difficult at first, but the convenience of an agency may be purchased at too high a price.

CHRONICLE.

ACTION OF MORPHIA INJECTED SUBCUTANEOUSLY.

One thousand experiments were made upon himself by M. Chouppe. He found that morphine injected in a painful spot developes its anæsthetic action in two to two and a half minutes earlier than when injected at a distance. Pain ceased sooner after direct than after general application. A direct proof of the local action of the drug was derived from the employment of concentrated solutions. While an injection of distilled water and a weak solution of morphia (1-150) caused sharp pains at the point of insertion, strong solutions (1-50 or 1-120) cause no perceptible pains. Therefore it is better to inject at the seat of pain and to use concentrated solutions. We can corroborate M. Chouppe on this point.

CLOTTING OF THE BLOOD.

In the earlier volumes of "St. Bartholomew's Hospital Reports" Mr. Savory treated at length the subject of Thrombosis and Embolism. In the second volume attention was drawn by Sir James Paget to cases of phlebitis attacking preferentially the veins of the lower limbs in persons of gouty constitution. In the new volume Dr. Henry M. Tuckwell records three cases illustrating the great danger of embolism in gouty phlebitis, and shows that other abnormal states give rise to the same danger, one of these being chlorosis. In gout, he observes, the clotting usually takes place in the superficial veins, mostly of the legs, from which it creeps upwards. In chlorosis, on the contrary, clotting may occur in any vein—in the femoral veins, the cerebral sinuses, or even in the cavities of the heart. A further distinction—in gout the veins are inflamed prior to the clotting, in chlorosis not. Hence we should speak of gouty phlebitis and chlorotic thrombosis. Dr. Tuckwell relates three cases of the latter, and quotes a fourth from the "Pathological Transactions" which he thinks admits of the same interpretation.

IMPERFECT TEETH AND ZONULAR CATARACT.

Mr. Hutchinson communicated to the Pathological Society on the 2nd of March some important observations on this subject. It has for some time been known that children with cataract usually show also badly developed teeth, and Mr. Hutchinson's object was to give more precision to our knowledge in respect to the coincidence of these conditions. He believes that imperfect teeth are only met with in one form of the cataract of childhood—viz., the zonular or lamellar. Mr. Hutchinson states his conclusions as follows:—

1. That it is exceptional to meet with lamellar cataracts, excepting in association with an imperfect development of the enamel of the teeth; but that definite exceptions, in which the teeth are quite perfect, do occur.
2. That the kind of defect observed in the teeth consists in absence of the enamel, and is shown in the incisors, canines, and first molars of the *permanent* set, to the almost invariable exemption of the præ-molars. That, for purposes of diagnosis, the first molars are by far the most important, and may rank as the test teeth, since they not unfrequently show the defect when the others escape.
3. That it is highly probable that the defects in the development of the teeth are usually due to the influence of mercury exhibited in infancy; although it is quite possible that other influences, attended perhaps by inflammation of the gums, may occasionally produce similar results.
4. That teeth of the kind alluded to are met with very often in persons who are not the subjects of zonular cataract.
5. That the very important observation may by Arlt, that the subjects of lamellar cataract have usually suffered from convulsions in infancy, is fully borne out by further examination; and that it is very unusual to find lamellar cataract without such history.
6. That it is probable that there is a direct connection between the occurrence of convulsions in infancy and the development of lamellar cataract.
7. That, whilst there is every reason to believe that the defective teeth which are met with in connection with lamellar cataract are the results of mercury, the evidence seems opposed to the belief that the lenticular opacity is also due to the influence of the drug. The great frequency of mercurial teeth without lamellar cataract, and the not infrequent occurrence of lamellar cataract without mercurial teeth, are opposed to this view.
8. That the very frequent coincident occurrence of lamellar cataract with defective teeth, is to be explained by reference to the frequency with which mercury is given for the treatment of convulsions in infancy.
9. That there is no reason whatever for supposing that lamellar cataracts have any connection with hereditary syphilis.
10. That, whilst it is certainly true that lamellar cataracts are commonly met with in young persons who show general defects of development, short stature, ill-shaped heads, defective intellect, dwarfed lower jaws, or other physiognomical peculiarities, yet there is seldom any proof of the existence of rickets; whilst it is quite possible that the peculiarities mentioned may be due to the disturbance of the nervous system in infancy in connection with the convulsions.

11. It is very important to distinguish between mercurial teeth and syphilitic teeth, and the peculiarities presented by each usually render this easy; the two are, however, as might have been expected, not uncommonly met with together.

CRAYONS OF IODOFORM.

M. **Gallard** prescribes crayons of iodoform, which he allows to remain in the cavity of the neck of the uterus, retained in position by means of a tampon of cotton. These crayons are used with advantage in cases of superficial ulceration of the neck which has invaded the cavity. The formula is—

℞ Iodoform, in very fine powder, ʒiiss.;
Gum arabic, finely powdered, gr. viiss.

Sufficient mucilage to make into a pilular consistence. Divide into ten cylinders each about one inch long; dry in the air for twenty-four hours. Each crayon contains a little less than a grain of iodoform. These cylinders are hard and resistant; they may be divided into morsels without breaking.

They become disintegrated in the open air, and much more rapidly in the uterine cavity. In order to preserve these crayons, they should be sealed in a dark and air-tight bottle.

We should think this mode of employing iodoform would be useful in other localities.

HÆMORRHAGE.

In his second Lettsomian Lecture Mr. Maunder stated his conclusions from his cases of hæmorrhage as follows:—

1. That no operation is to be performed when bleeding has ceased, unless a repetition of it would directly endanger life.
2. That the bleeding vessel is to be sought at the seat of injury, and to be secured, if divided, at both ends, either by a ligature or by torsion; if only wounded, by a ligature above and below the wound; or after section, by torsion.
3. That the injured vessel is only to be tied on the cardiac side of, and at a distance from, a wound in it, when the attempt to secure it at the wound has either been made and failed, or when such an attempt would be either anatomically injurious or pathologically useless
4. That it is desirable to ligature the brachial artery, rather than both radial and ulnar, for secondary hæmorrhage from the hand.
5. That ligature of the brachial, while it stops bleeding, also arrests destructive inflammatory changes caused by useless local efforts to check hæmorrhage.
6. That blood flowing from the distal side of a wound in an artery, or ligature upon it, will in the lower extremity be often, in the upper extremity occasionally, venous in colour.
7. That in malignant disease, when the growth cannot be removed and it is impossible to check bleeding by milder measures, the feeding artery may be ligatured in its continuity.
8. Where a part is more or less disorganised, and hæmorrhage renders repair very doubtful, amputation should be performed to arrest bleeding and remove a hurtful member.
9. Indirect compression will occasionally arrest severe bleeding.
10. That both the axillary and the femoral arteries may be wounded, and a pulse be felt at the extremity of the limb.
11. That a wound in an artery may be recognised by the warm blood impinging on the inserted finger.
12. That direct compression upon the bleeding point will often succeed *after* the main artery has been tied, though it failed *before*; and this fact is a justification for tying a main vessel.

EXPERIMENTS ON THE RECENTLY DEAD.

Our American exchanges devote attention to this subject, in consequence of experiments performed upon the body of Heidenblut, a murderer, directly after his remains were removed from the gallows. Those upon the laryngeal nerves were instituted at the request of Dr. Weir Mitchell, and were performed by Dr. W. W. Keen with the assistance of Dr. Carl Seiler. Some years ago Dr. Weir Mitchell discovered a remarkable chiasm in the laryngeal nerves of the turtle, and also experimented upon the cat and rabbit, but without result. He did not examine the dog in which it was lately stated in England that bilateral spasm of the larynx was produced by galvanising one recurrent nerve.

Within thirty minutes after the execution of the criminal, Dr. Keen carefully dissected out the pneumogastric of one side, insulated the nerve by means of strips of pure rubber cloth, and then applied the two wires of the battery directly to the nerve. Meanwhile, Dr. Seiler attempted to watch the action of the larynx in the ordinary manner; but the hyoid bone of the subject had been fractured, thus closing the pharynx. Besides this the throat of the dead man was occluded by a tenacious mucus, so that it was impossible to see the larynx. Dr. Keen therefore made an incision just above the thyroid cartilage, large enough only to admit the mirror, and recommenced the faradisation of the nerves. The vertebræ were neither fractured nor dislocated. This is the third case of judicial hanging in which Dr. Keen has found this to be the case. The sterno-cleido-mastoid muscle of the right side had been completely torn asunder by the pressure of the rope, the sheath being the only bond of union. Both vagi were apparently uninjured, and the recurrent nerves had been untouched by the rope. Upon reapplying the current the vagus responded perfectly, but only one side of the larynx was affected. In spite of a forty-cell current and in spite of the afferent fibres which this nerve contains, no other result could be produced. Bilateral action of the vocal cords by galvanisation of one recurrent nerve could take place only in case a chiasm existed between the laryngeal nerves (because this nerve contains only efferent motor fibres), and no such chiasm was found: only one nerve responded. Except it be that in this case the nerve centres were injured by the pressure of the rope, thus preventing a transmission of the current from one set of nerve nuclei to the other, these results would seem to be opposed to the observations of Dr. George Johnson in the paper he lately brought before the Medico-Chirurgical Society.

Dr. Keen next galvanised the phrenic. The nerve did not respond. He then applied the current to the intercostal muscles, and proved most satisfactorily that the internal intercostals are muscles of inspiration and that the external intercostals are muscles of expiration, the former lifting the ribs, the latter depressing them. This manner of testing these muscles, which Dr. Keen was probably the first to attempt, will undoubtedly decide the question as to their real function, touching which there has been so much confusion of opinion. He also tested some of the facial muscles in relation to the part they take in expression, and found that the pyramidalis nasi, as stated by Darwin, is a direct antagonist to the occipito-frontalis.

Experiments were made by Prof. Robert Smith on the stomach of the same criminal. The following are his deductions, confirming entirely those obtained by Profs. F. G. Smith and Rogers, from the analysis of the gastric juice of Alexis St. Martin:—

1. The gastric juice presents an acid reaction both before and after filtration and distillation.
2. The acidity in this instance was not due to the presence of hydrochloric acid.
3. Lactic acid did exist.
4. Acid phosphate of lime showed no evidence of its presence.
5. Neutral phosphate did exist, and was held in solution by the lactic acid.

CHOCOLATE IN CHRONIC INTESTINAL CATARRH.

Dr. Karner relates in the *Allgemeine Wien. Med. Zeit.* the following case: "Rosalia M., aged 17 months, poorly developed and nourished, suffered from intense meteorism, numerous thin, fluid, feculent discharges, which alternated from time to time with normal stools. There was considerable emaciation, and the child also had intertrigo, of which there were frequent relapses. The diarrhœas could be attributed only to poor nourishment. After strictly regulating the diet, small doses of Dover's powder and acetate of lead were first administered, and in three days were substituted by the chocolate, of which a cupful was given daily. A dessertspoonful of the powder sufficed for a cup of chocolate. The mother was also instructed to allow the child as little fluids to drink as possible. The result was astonishing. The discharges decreased in number day by day, the weight of the child rapidly increased, and after a few weeks it had perfectly recovered; a remarkable change for the better was observed in its bodily development, and the intertrigo had not recurred."

Such cases of chronic intestinal catarrh admit of no experimentation, as the physician is usually called at a time when the symptoms of disease have already assumed a threatening aspect. "By this diarrhœa," says Niemeyer, "the previously healthy, well-nourished child is at first but little affected; but some fatal judgment often asserts it to be a safety-valve that protects the child from convulsions during teething, and that must not be stopped. Hence it often happens that the doctor is not called till the child has become flabby and relaxed, and then it is frequently difficult to master the disease; the diarrhœa continues, the child emaciates more and more; and a large number of children die during their second year from chronic catarrh of the intestines."

THE THERAPEUTICS OF FUNCTIONAL HEADACHE.

In an article in the *Phil. Med. Times* Dr. Allan McLane Hamilton, Lecturer upon Nervous Diseases at the Long Island College Hospital, says that all remedies for the alleviation of the several varieties of this condition may be included under the following heads:—

- I. Internal.
  - Cerebral anæmiants.
  - ,, stimulants.
  - Those diminishing reflex irritation.
  - ,, ,, remote local congestion.
  - Cardiac sedatives.
  - Alteratives.
    - Malarial.
    - Syphilitic.
    - Gouty.
    - Rheumatic.
- II. Local.
  - Peripheral irritants.
  - ,, anæsthesiants.
  - ,, revulsives.
- III. Galvanism.

ANEURISM OF THE ABDOMINAL AORTA TREATED BY IODIDE OF POTASSIUM.

In the *American Journal of Medical Sciences*, Dr. Mathews, of Texas, reports a case of this kind successfully treated by the method first proposed by Dr. George W. Balfour, of Edinburgh, viz., the administration of iodide of potassium. The aneurism extended from under the sternum obliquely downward to below the umbilicus. The patient was ordered twelve and a half grains of potassium iodide in syrup of sarsaparilla three times daily, and this was gradually increased to a drachm in the course of the twenty-four hours. He says, "My patient began at once to improve. The large doses seemed at first to irritate the stomach a little, but this soon passed away. When I began the use of the remedy the lady was confined closely to her bed, could not sleep unless under the influence of chloral. Now five months have passed; she is able to be up nearly all the while; sleeps without the soporific; rides about, even on horseback, a good deal, and is apparently in very good health. The aneurismal thrill and the bruit once so distinct are nearly absent, though the remains of the 'sac' can be distinctly felt, yet very much smaller than it was at first. I used nothing but the iodide of potassium, except during June, when I gave between the iodide doses of one drachm of flu. ext. ergot and five drops of tr. digitalis. I have kept up the use of the iodide steadily till now, except for two weeks. At present I am giving five grains of iodide of potassium and three grains of carbonate of ammonia three times a day."

INTERNATIONAL MEDICAL CONGRESS.

The next Congress will be opened on the 17th of September, at Brussels. All medical men are eligible to become members, and the fee will be only half-a-guinea, including a copy of the Transactions.

Further information will shortly be published, and no doubt this, the fourth Congress, will be as successful as its predecessors.

BLEEDING IN ACUTE RHEUMATISM.

Dr. Carpentier has reported in the *Pres. Méd. Belge* some cases which, under the care of Professor Crocq, were treated successfully by bleeding. The Professor maintains that rheumatic fever is only synovitis attacking several membranes at once or successively.

Adhering to former views on inflammation, he therefore believes that blood-letting is our most efficient remedy. He even goes so far as to replace the buffy coat and cupped appearance of the clot in their old supremacy, and does not hesitate to repeat venesection according to the rules formerly laid down from these indications.

ACTION OF THE BILIARY SALTS ON THE SYSTEM.

In the *Journal de l'Anatomie et de Physiologie* appears a communication from MM. v. Feltz and E. Ritter, on "The Action of the Salts of the Bile Acids on the System." The results of their experiments on dogs are as follows:—The biliary salts are extremely poisonous, and are rapidly eliminated from the system when injected into the blood, as evidenced by an increase of all the secretions, the ptyalism, abundance of the urine, and watery stools. When the poison is intense, the blood-corpuscles are dissolved and the blood becomes diffluent; the proportion of fatty matter and cholesterine in the corpuscles is increased; the colouring matter passes off with the urine; hæmorrhages of the mucous membranes are frequent; the temperature of the animal is slightly depressed; excretion of urea is diminished, that of uric acid increased; the urine often becomes alkaline, and contains traces of albumen and indican. The slow action of bile-acid poison produces fatty and granular degeneration of the liver and kidneys. In this respect it resembles the action of phosphorus, but differs from it by not producing muscular lesions. They found the taurocholate of sodium more active than the glycocholate, but the mode of action of both was similar.

SLOWNESS OF PULSE.

Mr. Pugin Thornton lately brought before the Clinical Society a case in which the pulse had at one time beat only 16, and for some weeks did not reach higher than 24 per minute. The patient was a young married woman, upon whom, in 1872, Mr. Thornton performed tracheotomy for syphilitic laryngitis. Her pulse at the time of the operation was 40, and it was not until six weeks later, when the tracheotomy-tube was removed, that the extraordinary slowness of her pulse was noticed. This infrequency had been accompanied by transient attacks of an epileptiform character. It appeared that, in the summer of 1870, she was first seized with these fits, which at that time happened daily for about two months, the pulse averaging about 24 pulsations per minute. The woman, at the present time, is in good health, her pulse being constant at 48; but she is still periodically obliged to take iodide of potassium to stop the recurrence of the laryngitis, which occasionally threatened. Mr. Thornton could not account for the curious phenomena, unless that the pneumogastric nerve might be presumed to be in some way affected by the specific poison.

Mr. Callender said that in some cases of slowness of circulation the patient seemed to suffer from cold; but he had patient recently in St. Bartholomew's who had a pulse of 32 only, whilst a more robust man there could not be. Another member stated that in one of the earlier volumes of the *Medico-Chirurgical Transactions* there was a case recorded in which the pulse ranged from 25 to 7. At the post-mortem the foramen magnum was so contracted that it would hardly admit the tip of the little finger; and there was hypertrophy of the superior cervical ganglion of the sympathetic nerve. Dr. Symes Thompson remarked that the late Mr. Hodgson had a pulse which rarely exceeded 32; and used to draw attention to the fact that a slow pulse might exist for years without the production of any manifest symptom.

Dr. Archibald Hewan informed the Society twenty years ago his pulse was 72. After great study it was found to be 55; from that point it had gradually decreased. Eight years ago it was 24. Then Dr. B. Sanderson traced it with the sphygmograph. He never had a fit nor fainted, and could bear cold well. He had lately climbed a mountain several thousand feet high, and his pulse at the top was 40. His urine had not altered in any way; his digestion was very good, and he was in good health. Dr. Althaus said that Napoleon the First had a slow pulse, and always felt uncomfortable, except in the excitement of battle, when it would rise to 60. Dr. A. Hewan mentioned that he had had rheumatic fever eight years ago, when his pulse did not rise above 32. Eight weeks ago he had gout and rheumatic pains, when his pulse quickly rose to 64 and 68, and then fell slowly to 32 and 28, at which it stood at present.

USE OF BLISTERS.

Dr. Hollis, in an interesting paper on "The Therapeutic Action of Vesicants," in the new vol. of "St. Bartholomew's Hospital Reports," submits that he has experimentally proved:

1. That their local action consists in first diminishing, and subsequently in destroying the vitality of the parts with which they are brought into contact.
2. That this action is also depletory; whilst increasing the amount of blood in the tissues immediately under the blistered surface, it renders the deeper subjacent structures very anæmic.
3. That, besides the depletory action, blisters influence the system generally, depressing the heart's action, slowing the blood stream, and cooling the temperature of the body. These results are probably due to the reflex action of the central nervous system.

A DANGER OF ETHER AT NIGHT.

Dr. Wm. Hunt publishes in the *Philadelphia Medical Times* a very important caution as to the use of this agent at night—viz., that the lights should always be *above* the operator and etheriser, and the neighbourhood of a low grate or open stove should be carefully avoided. The vapour of ether is very heavy, and falls rapidly, as any-one can test by pouring a little of the liquid into a saucer and watching it roll and fall over the sides. One of the most exciting and seriously threatening scenes that Dr. H. has ever been engaged in happened, he says, in this way:—"A man required amputation of the arm (which was crushed by an engine) high up. There was, fortunately, just room for the tourniquet. The residents of the hospital, together with Drs. Agnew and Herbert Norris, were assisting. The latter administered the ether from a large sponge, and placed the bottle on a chair at his side. I had just removed the dangling fragments of the limb, when an assistant brought a candle close to the stump, and almost directly under the sponge. Instantly we were in a blaze. Dr. Norris involuntarily started back, and, in doing so, knocked over the chair with the large ether bottle, which broke! Its contents were quickly spread, and the whole ring of the amphitheatre was on fire. A nurse lifted the patient from the table and placed him on the floor. Fortunately, the tourniquet held. Others sprang into the side wards and seized blankets, coats, and anything at hand, and we soon stamped the fire out, but were all more or less singed. The walls of the amphitheatre bore evidence for a long time, in the scorched wood and blistered paint, of the danger. The exposed parts of the patient were superficially burned, but he never knew what had happened. He was placed on the table, and the operation was finished. The thorough anæsthesia here was fortunate for all. Had the fire taken place earlier, terror and excitement from ether combined would have made the man uncontrollable, and a fearful panic might have occurred in the hospital. As it was, no alarm was spread beyond the room."

Night operations with ether should, therefore, only be those of absolute necessity, and with the cautions enjoined there need be no danger. Chloroform, not being inflammable, has a great advantage over ether in this respect; but Dr. H. is afraid of it.

ON HYDROCELE OF THE NECK.

Mr. Sampson Gamgee relates in the *Lancet* the following interesting case:—

In March last year he saw a healthy-looking boy, two years old, who had a tumour on the left side of the neck. The growth was noticed very soon after birth, and had steadily increased to its present size. When the clothes were removed, he found a round smooth mass occupying the whole left side of the neck, and projecting over the clavicle on to the upper part of the pectoral region. Fluctuation and translucency being very distinct, he introduced a trocar at the most dependent part in front, and drew off nearly a pint of pale, straw-coloured, and richly albuminous liquid. The aperture was closed with styptic colloid, and a cotton-wool compress applied. The child was again brought to him last December; the tumour was larger than when first seen, and the contents, though still liquid, had undergone a bloody change. The mass was no longer translucent, and the skin was uniformly bluish. Mr. Gamgee introduced two ordinary-sized drainage tubes from back to front, at a distance of a couple of inches, and applied a tenax compress. A considerable quantity of reddish fluid oozed through the tubes, but as days elapsed the mass did not perceptibly lessen, and it became evident that something more must be done to effect a radical cure. Dissection has proved that these congenital cystic growths in the neck are under the fascia; and in the particular case entire removal would only have been possible after a dissection attended with risk. With a view to effect a cure with the utmost safety, Mr. Gamgee removed the two small drainage-tubes, and Dr. Mackey having administered chloroform, made an incision on the anterior aspect, a little below the middle line of the tumour, and pushed into its centre an india-rubber drainage-tube, two inches long and a quarter of an inch in diameter; the anterior extremity of the tube projected slightly from the wound, and was kept in position by a loop of thread on each side secured by adhesive plaster. At the end of a week a great deal of irritation had been set up; the mass was hot and semi-solid; the child was feverish, and the discharge semi-purulent. The tube was now removed, and a linseed poultice applied. Within a week three separate collections of matter were evacuated by the aid of the lancet; fever subsided, a dry pad was applied with daily increasing pressure and the rapid decrease of the enlargement. No trace of it is now perceptible, and the child is perfectly well.

NASOPHARYNGEAL POLYPUS: HYPERTROPHY OF THE MUCOUS MEMBRANE: TRACHEOTOMY: REMOVAL OF SUPERIOR MAXILLARY BONE: DEATH.

Dr. Arthur S. Underhill has related the following case in the *Brit. Med. Jour.*:—

A boy, aged 14, was brought to his surgery last month suffering from difficulty of swallowing and great difficulty of breathing, particularly when in the recumbent position. He had had occasional attacks of hæmorrhage from the nose. The disease commenced eight months ago with an inability to blow down the right nostril. He had gradually grown thinner; the hæmorrhage, which was sometimes very considerable, had greatly debilitated him; in fact, so weak was he that he was unable to walk any distance, or even to stand for any length of time. On examination, the soft palate on the right side was seen to be bulging considerably forwards and downwards, so as entirely to preclude the view of the pharynx; the bulging was tense, with no fluctuation. On attempting to pass the finger down the pharynx and to hook it over the soft palate, a number of small oyster-like bodies were felt entirely occluding the posterior nares and much contracting the cavity of the pharynx; they seemed to be sessile and closely packed together; no pain was felt after the manipulation, but there was very considerable hæmorrhage. In consultation with his father, Dr. Underhill decided to perform tracheotomy as a first step, as the patient's condition was not such as to warrant a very severe operation, and it was imperative that his breathing should be relieved. The night before the operation, so great was the dyspnœa that his attendants had to constantly change his position and shake him, as they were afraid that his breathing would entirely cease.

After tracheotomy the relief was immense. He slept well, and became very lively; but the polypi increased rapidly in size, so much so, that it became a matter of difficulty to swallow even liquids. Dr. Underhill, as a *dernier ressort*, excised the right superior maxillary bone fifteen days after the first operation. There was less hæmorrhage than anticipated. The bones, being young and soft, separated readily, thus enabling the operation to be rapidly performed. The mucous membrane everywhere was considerably thickened, and a number of small polypi, varying in size from a pea to a moderately-sized oyster, studded the mucous membrane as far down as the finger could reach. Some of these were torn away with the finger-nail; and others lower down were removed with the écraseur. The operation was necessarily a bloody one, and the actual cautery was necessary. The boy temporarily rallied, but gradually sank seven hours after the operation.

Dr. Underhill thinks that in major operations about the mouth and air-passages tracheotomy should be performed as a first step. In this case he was compelled to do it. Tracheotomy (at all events, before adolescence) is an easy and comparatively safe operation; and chloroform can so safely and so effectually be administered through the trachea-tube without hampering the operator or his assistants, and the patient has a free opening to breathe through, not being choked, as they usually are, by the blood which necessarily trickles down the air-passages, and when coughed up sputters over the operator. Having a tube in the trachea also allows a sponge to be placed at the back of the pharynx, and so prevents any blood from entering the œsophagus or trachea. He recommends a tube without a fenestrum, so that, if it fit the trachea well, no blood can possibly enter through it.

DR. DRYSDALE ON SYPHILIS AND MERCURY.

Dr. C. R. Drysdale has had the courage to avow that, after opposing the use of mercury in syphilis for many years, he has been convinced by recent observations that it may be used with benefit in some cases. This unusually honest avowal was made in a paper read at the meeting of the Medical Society of London on the 15th ult., "On the Antecedents and Treatment of Tertiary Syphilis." After tracing his own gradual accession to the mercurial plan of treatment in primaries and secondaries, Dr. D. went on to say that tertiary syphilis was only now beginning to be well understood, for Hunter knew nothing of the brain disease or diseases of the viscera now recognised as frequently arising from the effects of the poison. By tertiary syphilis he meant that group of symptoms which arise far on in the disease which are not hereditary, and not contagious, as secondaries often are. As to the causes of tertiaries, he considered that all cases of syphilis tended to be succeeded by tertiary symptoms, but some had no tertiary stage. He opposed the opinion of Diday, who used to think that a very hard sore and bad secondary symptoms were proof that the tertiary stage was likely to appear; and he considered that women, as a rule, suffer more from tertiary lesions than men. Old age, scrofula, or a tendency to consumption, drunkenness, bad living, and other lowering causes tended to produce tertiaries; but even in the healthiest persons severe and even fatal lesions might ensue in the course of years. As to whether courses of mercury could prevent the appearance of tertiary symptoms, Dr. Diday replied in the negative, but Dr. Drysdale had felt convinced by the evidence given by Dr. Alfred Fournier, of Paris, in some lectures on Syphilis delivered in 1871, that careful courses of mercury are very potent means of warding off the tertiary stage. Dr. D. went on to say he should like to know how long mercury ought to be given to prevent tertiary syphilis, English authors being entirely silent on this subject. His own prolonged treatment of secondaries with iodide of potassium had soon taught him that Mr. Syme and Dr. Hughes Bennett were mistaken when they attributed the appearance of tertiaries mainly to the abuse of mercury, as they occur frequently when no mercury is given at all; yet he believed, with Sir James Paget, that the old way in which mercury was used before iodide of potassium was in vogue greatly deteriorated the tertiary symptoms when they arrived. As to the treatment of tertiary syphilis, he would like it to be laid down, as a rule of practice, that the main treatment for this stage was the iodide of potassium, and he hoped ere long the citizens of Dublin would erect a statue to Wallace, the great discoverer of that precious boon to syphilitic patients. In rupia and pustulo-crustaceous syphilis, mercury was said by Mr. Hutchinson sometimes to prove of most signal service; and this was true, but in real tertiary syphilis occurring far on in the disease, the author thought that the antidote mercury was out of place, and for the most part very injurious, whilst the analeptic iodide of potassium in large doses, or sometimes iodide of iron, was the remedy required. In some rare cases the two latter failed, then mercury should be tried; but, according to Dr. D.'s experience, in lesions of the nerves far on in syphilis all treatment was sometimes unsuccessful. Virchow and the school of Aix-la-Chapelle had lately much extolled mercury in all stages of syphilis, and depreciated iodide of potassium. Dr. Thiry, of Brussels, had gone so far as to say that iodide of potassium had no effect upon tertiary syphilis, unless when mercury had been abused. This was quite untenable; for he agreed with Drs. Perrin and Dolbeau that iodide of potassium was quite as valuable when tertiary syphilis had appeared in a person totally untreated by mercury as in one who had taken the drug for years. Dr. Hardy and Mr. Balmanno Squire give both mercury and iodide of potassium in all cases of tertiary syphilis, but the author could not see the least use of giving mercury when iodide of potassium was so often all-powerful by itself. He had no theory as to the action of the last-named remedy. The phenomenon belonged to the marvels of the art of medicine, to be admired and communicated to our successors.

TOPICS OF THE TIME.

SEPTIC PROCESSES AND FEVER.

In a course of lectures on "The Occurrence of Organic Forms in connection with Contagious and Infective Diseases," delivered at Owens College, Manchester, Professor Burdon Sanderson has treated this and other allied subjects with great perspicuity. We can only refer to those of his statements that specially relate to disease, and in doing so we shall keep as close as possible to his own form of expression.

There are three sets of diseased processes, he tells us, in which bacteria are supposed to be concerned: the process of fever, certain processes dependent on inflammation, and the various processes of specific infection. The relation of the development of bacteria to the febrile process can be investigated experimentally; for liquids are within our reach that have this property—viz., when introduced in a very small dose into the circulating blood of a living animal, they produce fever— a fever which derives its claim to be so called not merely from its being attended with rise of temperature, but from its consisting of the successive stages which go to make up a febrile accession or attack—viz., a period of latency, a rigor with rapid rise of temperature, followed by loss of muscular power, and a period of decline, the whole process being of short duration—not more than five or six hours, and not being accompanied by any local disease whatever, but being throughout a blood-process.

The liquids in question are exclusively derivable from one of two sources—viz. (1) products of inflammation; (2) products of putrefactive decomposition of blood, muscle, or other animal tissues, and Dr. Sanderson speaks of them as "pyrogenic liquids." Among inflammation products, those of serous and catarrhal inflammations are the most frequent sources. As regards the former—*i.e.*, liquids of serous inflammations, those are most active which are of infective origin—*i.e.*, those of which the producing processes are secondary. Of catarrhal products, Senator, and also Dr. Sanderson, have used the expectoration of the purulent stage of phthisis. From this liquid an extract can be obtained by treating it with two per cent. solution of common salt, which admits of filtration. This extract is always pyrogenous.

All liquids are apt to contain bacteria; they are not, however, putrid in the ordinary sense; the last mentioned, for example, retains the peculiar odour of purulent expectoration; all of them are more active when freshly prepared. If they are subjected to the temperature suitable for putrefaction, they very rapidly lose their activity, and the rate at which this occurs varies with that of the putrefactive process. This must not be understood to mean that they were not at first in a state of decomposition, but simply that the *pyrogen* (as we may call it, whatever its chemical nature) is a product which is produced at an early stage in the septic process.

But there is another source from which pyrogenous material can be derived—viz., from any animal liquid or tissue in the early stage of septic decomposition. The favourite tissue for the purpose is muscle. If a quantity of muscle be chopped up and placed in water at a temperature of from 60 deg. to 70 deg. Fahr. for a couple of weeks or so, an infusion is obtained which is pyrogenous. The exact period at which it acquires this property depends on various conditions, more than all on temperature. If this period be allowed to go by, the pyrogenous activity declines, while the obvious signs of putrefaction become more apparent.

If the extract be used in the crude state, the result of introducing it into the circulation is often rapidly fatal. The reason of this is that embolism occurs. Little plugs are formed which find their way into the pulmonary artery and produce sudden death. Even if the liquid be strained, the production of fever is not the only one which presents itself. Local effects are produced to which Dr. Sanderson applies the term secondary inflammation—viz., infective nodules in the internal organs—serous and mucous inflammation. Those animals which are prone to tuberculosis become, in consequence of such an injection, eventually tuberculous, although at the time they may apparently recover from the immediate effects. These effects—all of which must be regarded as in so far embolic that they are dependent on the circumstance that the liquid contains particles of irritating material which are carried by the blood-stream to various parts of the body, and there prove foci or centres of infective inflammation—have evidently no necessary connection with fever in the sense in which we have agreed to use the word—viz., as consisting in rapid augment of temperature, attended with the characteristic muscular phenomena of rigor, followed by adynamia, and succeeded by a much more gradual decline.

It may, however, be possible by suitable methods to obtain this purely pyrogenic effect without the others. In other words, there may be in muscle-extract, at an early stage in the process of putrefaction, a substance which possesses the pyrogenic activity without that of producing secondary inflammation.

Now it is a remarkable fact that no therapeutical agent, no synthetical product of the laboratory, no poison, no drug is known which possesses the property of producing fever. The only liquids which have this endowment are liquids which either contain bacteria or have a marked proneness to their production.

In a mixed liquid, we have reason to believe that a body exists which has the property of producing fever. Suppose we succeed in separating from it a crystalline principle which forms compounds of definite characters and constitution. To us this is of no value, unless it can be shown that the body so obtained contains the fever-producing property. Or suppose a certain organic form is present, and that we can determine its botanical characteristics, it is of no interest unless it can be proved that the form encloses the property. It was from forgetting this that Hallier lost his way. He forgot that, in the investigation of morbific agents, pathological experiment and observation are the only safe guides.

Assuming that, in all probability, the pyrogenous is separable from what has been called the "phlogogenic" action of the septic extract of muscle, Dr. S.

wishing to separate them so as to obtain the pyrogen" in a convenient form, adopted the following plan:—

"The liquid is first precipitated by absolute alcohol. The precipitate is separated by decantation, again extracted by boiling alcohol, and then filtered. The residue, after having been freed from alcohol by placing it *in vacuo*, is extracted with distilled water. The water extract is at once filtered. It is a limpid liquid, which, on injection into the circulation, proves to be pyrogenous. It contains 1.2 per cent. of solids. The dose required to produce a characteristic access of fever in a moderate-sized dog is five cubic centimetres, that is, three-quarters of a grain of solid matter.

"From this experiment two conclusions suggest themselves—1. That the agent, of whatever nature, is soluble in water, insoluble in strong alcohol; 2. That it cannot consist of bacteria, or have anything to do with them. Both of these conclusions would be erroneous, and this leads me to what I regard as the kernel of the experiment, viz.: We have an apparently homogeneous and transparent solution which is pyrogenous. Are its constituents really in solution? Is it really homogeneous? If I had not from other experiments learnt that no "animal poison" is really soluble, I should have answered the first questson unhesitatingly, Yes. To test it, we apply a method first introduced into pathological investigation by Professor Klebs of Prague—namely, filtration under pressure through porous cells. By applying this method, I obtain a second filtrate. I test it physiologically, and find that it is not pyrogenic. Pyrogen, therefore, is a substance which passes through filtering paper, but not through porcelain. Further, I find, on microscopical examination, that the first filtrate, although at first it contains no bacteria, is not entirely free from particles; and if I repeat the examination after an hour, bacteria are present in considerable numbers. If I examine the second filtrate in the same way, even twenty-four hours later, it remains barren. The porcelain has, therefore, removed from the liquid, along with the pyrogenous agent, that on which the development of bacteria depends.

"We can scarcely overlook the bearing of these facts on the question of the mode of origin of bacteria; for, considering that bacteria in their ordinary state are destroyed, as Dr. Bastian and others have shown, at the temperature even of boiling alcohol, and that, without reference to temperature, that they are inevitably killed by immersion in absolute alcohol, it is clear that our fever liquid as used contains no active bacteria. It is equally clear that it contains that particulate material out of which bacteria spring, for otherwise it could not be deprived of its fertility by filtration. It must, therefore, contain particles which, although they resist alcohol and heat, yet are endowed with a latent capacity of development. I may add that the existence of such particles has been inferred on other grounds by mycologists, who have compared their condition to that of the winter-spores (*Dauersporen*) of the fungi."

DENTIFRICES.

The Odontological Society has lately devoted a meeting to this subject, and as it is of interest to all, we bring before our readers the salient points of the discussion which arose on a paper by Dr. Rottenstein. The author traced the history of dentrifices from the time of Hippocrates, who, by-the-by, among other things, recommended charcoal as a tooth-powder, and then passed on to indicate the principles which should govern the selection of substances for the preparation of dentifrices.

He observed that, according to Mr. John Tomes, acids are the principal cause of dental caries. The acid, after first destroying the vitality of the parts, decomposes them little by little, but notwithstanding this, we do not succeed in producing artificially, by the action of acids upon the dentine, histological changes like those which we observe on caries. Nevertheless, the decalcification, the softening, the destruction of the teeth, are all phenomena due to the chemical nature of the process.

Dr. Leber and Dr. Rottenstein have, in a work on "Dental Caries and its Causes," shown that a parasitic element plays an important part in the production of caries. There is almost always found in the mucus of the mouth,(a) at the surface of the tongue, and in the interstices of the teeth, a whitish, cheesy substance, formed in great part by the *Leptothrix buccalis*.

In many parts the fungoid deposit takes the form of granulations, which are only movable spores in repose, which wander during a certain period in the liquid, but finally attach themselves somewhere, and increase by forming new articulations. These movable spores resemble vibrios which are found in the mucus of the mouth, and possess the power of rapid movement.

In cultivating the *leptothrix* in the saliva, with the addition of sugar or any other appropriate liquid, we ordinarily see developed movable spores in numberless quantities, which are endowed with a power of very rapid motion. If the movements cease, which is observed on the edges of the preparation where it begins to dry, the spores resemble exactly the granular masses of the *leptothrix* which are met with in the mouth.

The presence of the *leptothrix* may be demonstrated by the violet tinge which is brought out by the application of iodine followed by dilute sulphuric acid.

The progress of caries in the enamel is this: the enamel becomes porous under the action of an acid, and *leptothrix* enters the vacuities so formed. So soon as the enamel has been penetrated, destruction in the dentine commences with a softening decalcification, and accompanied by a brownish staining. We distinguish in dentinal caries two periods,—the preparatory *period of decalcification and softening*, during which microscopic changes are to be observed; and the *period of direct decomposition*. It is equally probable that the *leptothrix* exercises by its extension an active and direct part in the absorption of the carious tissue.

The superficial layers of disorganising dentine are formed by the granular masses, and by the filaments of *leptothrix*. On removing these we come upon layers of carious dentine, of a brown colour, the former fragments of which are enveloped and united by masses of *leptothrix;* above all, granular *leptothrix.* In the layers which lie still deeper, the volume of the dentine increases; the *leptothrix* diminishes in such a proportion that the dentine here forms the principal part. We see, then, in the carious portions coloured brown, irregular chinks and interstices filled with *leptothrix,* and its elements which, in the deeper portions, are always in a direction parallel to or identical with the course of the tubes.

(a) Mr. Bowditch, in examining the mouths of forty persons of different professions, and living different kinds of life, found in almost all vegetable and animal parasites. Those only were found to be free who cleaned their mouths several times a day, and a least once with soap.

The development of the fungus seems to be favoured by a slightly acid, or even neutral medium, but it cannot develope itself in a strongly alkaline liquid. The prophylactic indications are, therefore, the neutralisation of the acids and preservation of the teeth from all fermentation, and the arrest of the development of the fungi by proper care and cleanliness.

The word dentifrice, from *dentes* (teeth), and *fricio* (to rub), a purely mechanical action, has been followed too strictly to the letter. Most of the dentifrices that are prepared and sold now consist of tooth-powders. These can have only a purely mechanical effect, for the addition of vegetable powders, which are not soluble, can impart to them no medicinal action; but, on the contrary, these powders, such as myrrh, orris-root, Peruvian bark, &c., actually, so to speak, tattoo the gum in the same manner, though on account of their pale colours they are not so evident, as charcoal, and it is well known that dentists have often found, even after the loss of the teeth, the gums tatooed, as it were, from the use of powdered charcoal. In the composition of our dentifrices we must first consider their object, which is to keep the teeth perfectly clean; to neutralise acids; to counteract fermentation in the mouth; to preserve the mucous membrane free from that whitish, slimy coating which forms there; and to correct all unpleasant odour.

Soap, by imparting a slightly alkaline quality to the water, neutralises the acids, and prevents the development of fungi. In many cases soap does not suffice to remove entirely the deposit formed upon the teeth; in such cases there should be added to it powders.

Permanganate of potassa dissolved in water is an excellent mouth-wash, it is a very excellent antiseptic, and at the same time the best means of preventing fermentation; it exercises a beneficial action upon the mucous membrane of the mouth.

In the discussion which followed the reading of this paper, of which a fuller abstract appears in the *Brit. Journ. of Dental Science,* Mr. White said he thought Dr. Rottenstein was right in advocating the use of soap. For some years past he had been accustomed to recommend a dentifrice whose basis was soap combined with myrrh and orris, and a very little pumice-stone, but it required to be used very cautiously. If used too frequently it caused the enamel to become ridgy and thin. Soap would neutralise the acid which lodged in the crevices about a tooth and so destroyed it.

Mr. Vasey said that some time ago he had carried out a few experiments with pumice powder, and found that where coarse pumice would produce very little effect upon a tooth, levigated pumice would cut right through into the pulp cavity. He was convinced that such hard substances were far more injurious when used in a very fine state than when a coarser quality was employed. He did not consider any one could recommend a better dentifrice than that which had precipitated chalk for its base. He always recommended that, with a few grains of myrrh, which, being a gum, formed a kind of lather, and enabled the powder to pass more readily over the teeth than it otherwise would.

Mr. Underwood considered that the action of a tooth powder should be regarded in the same light as that of soap, which enabled a person to wash his hands more readily than he could with clear water alone. It was a mistake to look for any other quality in a tooth powder. He himself recommended his patients to purchase precipitated chalk.

Mr. Rogers attributed more advantages to frequency of brushing than to the use of tooth powder. In his opinion teeth should be brushed after every meal, if possible. Up to the time when he was thirty years of age he never used any powder, simply clean water. He then found that scarcely sufficient, and began to use soap, on the principle that it was a mild alkali. For another ten years that answered very well, but he now found it necessary to use a little precipitated chalk with the soap. These two substances combined with a small quantity of flavouring matter made a very agreeable tooth-powder.

Mr. Sewill said that Dr. Rottenstein had described the fungus as being a very active cause of caries, but Wedl had pointed out that it had no share in producing such a result. The most probable explanation was that the carious cavity was first formed, and then the fungus was deposited there. It was the acid which gave rise to the caries, and tooth-powders that neutralised acid must be useful in preventing caries. He thought something more active than soap was necessary, something which would pass readily into the cavities. He had been in the habit of prescribing carbonate of soda, but there was a common article of commerce, known as saponaceous tooth powder, made of pulverised soap rubbed up with precipitated chalk, and such preparations would assist better than anything else at present known in preventing caries.

Mr. Barrett condemned the use of bitartrate of potash, which was recommended by some persons. It had an acid reaction, and its effect on the teeth was destructive. It tended to destroy the phosphate of lime, and so to bring down the tooth structure, supposing the tooth to be attacked by caries.

Mr. Merson said he had advised his patients to use a powder composed of precipitated chalk with a little dry carbonate of soda and myrrh, but he had sometimes thought it necessary to use something that would act as an astringent to the gums, such as a strong solution of Quilla saponaria added to tannin.

Mr. White said that levigated pumice-stone was one of the most active agents in reducing sections for the microscope to the required degree of thinness, and he should consider it a very deleterious substance to mix, at any rate in large quantities, with a dentifrice.

The President, Mr. Tomes, said that something like twenty years ago he bestowed a considerable amount of attention upon the subject of dentifrices, and ultimately decided to recommend precipitated chalk with soap. The soap rendered the ropy, tenacious mucus which was found in the mouth soluble, so that it could be washed away from the interstices of the teeth more completely than when chalk alone was used.

Dr. Leslie said that Dr. Forbes, of America, had, after an experience of fifty years, advised his patients to make a solution of prepared chalk with alcohol. It was not so much necessary to rub a great deal, as to take care that the points of the brush got into the crevices.

Mr. Turner thought that if to the soap or French chalk which was recommended something was added which would make it more palatable, patients would use it much more readily.

Mr. F. Henry said that the necessity for the use of powder of some sort arose from the tendency in some mouths to the deposition of tartar, and therefore all that we needed was some mechanical agent to remove the tartar. Where there was no such tendency, he always shrank from advising the use of powder, for he had seen very serious results from its use, and had even had to plug a tooth with gold because the powder had worn a deep groove in it. He had very little faith in the use of dentifrices as a means of warding off caries.

Mr. Oakley Coles said he had great faith in the therapeutic action of dentifrices if they were used with that object, but if the only purpose was to clean the teeth of course it was unnecessary to consider any other point. If the gums were in a congested condition, and the teeth were very tender around the necks, a practitioner might exercise a great deal of skill and knowledge in the choice of the materials. Where the teeth were spongy and inflamed he had used a powder composed entirely of chlorate of potash well ground up. There was sufficient grit in that to cleanse the teeth, and as it was entirely soluble in the mouth its deposition around the necks of the teeth did no harm; it became absorbed, and its action upon the gums was highly beneficial. In one or two cases of prolonged neuralgia he had ordered quinine and precipitated chalk, and had found the result most satisfactory. The only possible explanation he could give of the cure was, that perhaps the neuralgia was caused by some irritation around the necks of the teeth owing to the growth of fungi, and the quinine acted as a decided opponent to their existence, and so got rid of the irritation at the extremities of the nerves.

TEMPERATURE.

It seems likely that some of our ideas on this subject must be modified. When the temperature rises to 110 or 112 deg. death rapidly and certainly occurs; and yet Mr. Teale's case would seem to show the possibility of an exception, unless, indeed, some curious error has been overlooked, or unless the high temperature reported was only local.

The researches of Lenker, Hayem, Ranvier and Cornil and others have shown that in diseases where the temperature is for a long time high the heart is so changed as to render it unfit for work. The same may be said of the brain and nervous system, as well as of the respiratory apparatus; even the blood and the muscles are altered at very high temperatures.

It is then, as we have said, impossible to understand how Mr. Teale's patient could have lived so long, digested her food, and breathed so naturally, when the heat of her body was so great; but one fact is worth much theory, and therefore we proceed to give an outline of the case which Mr. J. W. Teale has brought before the Clinical Society, a case in which a temperature ranging from 108 to 122 deg. and upwards had been maintained for a period of nearly nine weeks. The case had also been seen by Mr. Pridgin Teale. The patient, Miss G., was thrown from her horse on September 5th, 1874, as the animal was trying to take a five-barred gate at a standing jump. The horse fell upon the lady, and rolled two or three times backwards and forwards over her chest, as she lay on the ground, which was covered with large rough stones. Temporary unconsciousness followed. The fifth and sixth left ribs were found to have sustained a simple fracture in the middle of their length; she was conscious, but collapsed, complained of great pain in the back, and was severely bruised at various parts of the body. For several days after the accident, there was some feverishness; the temperature reached 101 deg., but became normal in a fortnight. The ribs united readily, and the patient was apparently convalescing, though she had pain and tenderness over the spine, especially about the sixth dorsal vertebra. It was considered that the pain and the slight feverishness were due to subacute inflammation of the spinal ligaments, and perfect rest on a water-bed was advised. During October the temperature remained at 100 or 101 deg.; there was pain, with tenderness, over the spine; sleep was disturbed; occasional twitchings of the legs occurred; and there was a feeling as of a cord tied tightly round the waist. The arms were unaffected. Leeches and ice-bags to the spine were employed; but the temperature slowly rose until, on November 3rd, it was 103.5 deg.; on November 6th, 106 deg.; and on the 7th, 107 deg. The respirations were unaffected; the pulse did not exceed 100. On November 7th it was thought that she had inflammation of the spinal ligaments and intervertebral substances, and possibly of the membranes of the cord, but that the cord itself was not primarily affected, except by pressure of neighbouring inflamed parts, as there was no paralysis of sensation or motion about the legs or sphincters, and it was determined to bring the system gently under the influence of mercury, by means of ointment applied to the thighs. On November 8th the temperature was 110 deg.; on the 11th, 12th, and 13th it was 111, 113, and 114 deg.; whilst on the 14th the index of the thermometer was buried in the bulb at the top of the instrument at a point above 122 deg. The pulse rose to 120, and became small, thready, and at times scarcely perceptible. Rapid emaciation occurred; there was intense pain along the spine, which was relieved by frequent hypodermic injections of morphia, and death from exhaustion seemed imminent. At times the power of swallowing was lost, once for forty-eight hours; nutrient enemata were given, and ice-bags applied to the spine. On November 16th the mercurial ointment was discontinued, the gums being slightly tender; and there was from that date an improvement in the general symptoms, though the temperature remained still as high as ever. The power of swallowing returned; the pulse fell to 110, and improved in quality; the spinal pain diminished; the twitchings in the legs were less frequent, and the patient could raise the legs more freely. The extraordinarily high readings of the thermometer ceased now to cause alarm, the patient having lived so many weeks with a temperature hitherto supposed to be incompatible with life. On December 12th the tongue became suddenly swollen, causing great distress, which subsided in about twenty-four hours. Thenceforward more decided improvement set in. The appetite increased; flesh and power were regained more rapidly, though the temperature still ranged from 110 to 114 deg. On January 7th, 1875, the temperature fell to 104 deg.; on the 8th to 102 deg.; and on the 10th it was normal. On the 12th the patient could take a few steps about the room, a slight drag of the left leg being perceptible. On the 22nd she walked one hundred yards in the open air. Mr. Teale thought that the result proved that the cord itself had not been seriously implicated, and that an excessive and long-maintained high temperature was not necessarily destructive of life. He said that seven thermometers had at different times been used to register these high temperatures, four of which had been since verified at Kew. Only one thermometer could be found which registered a temperature above 118 deg.; that one was marked up to 122 deg., and with that instrument the highest readings were taken. On December 1st, for the fifth time the index was buried in the bulb; as it was then found it still remained, and had been brought to the meeting for inspection. It was marked to 122 deg. The temperature was often taken in both axillæ at the same time, the instruments being reversed at each visit. The temperature between the thighs was generally found nearly to correspond with that registered in the armpits. Once, on December 10th, the temperature in the rectum was taken, and was found to be 111 deg., that in the axillæ at the same time being 110.4 deg. The patient could never bear the thermometer to be placed beneath the tongue. The thermometers were inspected by two or three trustworthy witnesses before and after each application, and the results were always immediately recorded in writing. No hot-water bottles were near the axillæ, as had been good-naturedly suggested. Sometimes when the thermometrical readings were highest, the hands, feet, and forehead were icy cold. The urine, during the period of high temperature, was very scanty, and a mass of lithates; it was passed with difficulty into hot towels, so that neither the amount of urea it contained, nor the specific gravity, could be estimated. It was found to be free from albumen on three or four different occasions. The bowels were relieved every third day by enemata; the menses recurred once after the accident at the proper date, and were then suppressed until January 26th, when they commenced and pursued a normal course. A large chart of the thermometric readings was exhibited to the members of the Society, and showed the rapid alteration of temperature which had occurred, without apparent alteration in the condition of the patient; thus, on November 12th, at 10.10 p.m., the temperature was 113.6 deg.; on the 13th, at 4 a.m., it was 122 deg.; on the 13th, at 10 a.m., it was 114.3 deg. During seven weeks the temperature never fell below 108 deg., and rarely below 110 deg. Whether the high temperature was due to lesion of the ganglia of the sympathetic, Mr. Teale could not venture to surmise. There was never at any time distinct loss of sensation. The temperature was usually higher in the left than the right axilla; the left leg was now slightly the weaker; and it was the left ribs which were broken.

Mr. Callender said that in no case of injury to the spine with recovery had he known the temperature to be above 107 degs. Dr. Greenhow had had cases of hyperpyrexia in rheumatic and typhoid fevers often under his care, but had never witnessed a rise so high as this. He had seen a patient with a temperature of 110 degs., but never one to recover. Dr. Farquharson contrasted this with a case observed by Van der Kolk, in which, with dislocation of the first dorsal vertebra and injury of the spinal cord, the temperature fell to 82. Some observers held that, if the cord was injured near the brain, the temperature was high; others asserted the contrary. Dr. Murchison had laid it down that in fever a temperature of 107 degs. was incompatible with life, even for a day. At post-mortem examinations in such cases, fatty degeneration of the brain and heart was found to have occurred. Mr. Hutchinson expected that the maximum temperature laid down by authorities as compatible with life in fevers would not apply to cases of injury to the spine. After injury to the spine low in the neck, there might be very high or very low temperature without apparently any reason. He mentioned the case of a man who had received an injury to his cervical spine, producing paraplegia, and had a temperature which never rose above 4 degs. below the normal. He was quite cold, even to the penis, which was turgid with blood, so that there was continual priapism; his face was quite cold, although he looked to be very well. He died on the fifth day. In such cases, however, there was mostly an exaltation of temperature, often to 110 degs. within twenty-four hours after the accident. He thought the mischief in Mr. Teale's case was in the spinal cord, although it was not a seriously disorganising disease. Mr. Pridgin Teale wished to add his testimony to the accuracy with which the case had been recorded. He himself took the temperature when it was at 110 degs., and three weeks subsequently at 114 degs. It was clear that we must give up the idea that temperature *per se* was an element of high danger. No injuries apparently were capable of raising the temperature so quickly to a high degree as those of the nervous centres. A gentleman, who at 5 a.m. received a compound fracture of his skull with crush of brain, was found at 5 p.m. to have a temperature of 109 degs., and was then dying. With apoplexy the temperature of the body often rose enormously. He hoped the time might shortly come when physiology might be able to throw some further light on these various points. In reply, Mr. J. W. Teale said that the pulse of his patient never exceeded 120, and was usually between 90 and 100. The respirations were never anything but normal, though sometimes excessively feeble.

SPECIAL DEPARTMENT.

THE PROGRESS OF OTOLOGY.

Anyone who desires to ascertain what has been the progress of British Otology during the last few years has only to compare Mr. Hinton's "Questions of Aural Surgery" (London, H. S. King and Co.) with the literature of the subject a decade ago.

Here we have, by the only person who could be said to represent the science of otology in England, a series of essays covering the whole subject, full of practical experience, and destitute of all dogmatism. To this work, which has also the merit of brevity, we refer all who desire to learn the extent of our knowledge in this interesting department of our art. The author has only lately retired from practice, and at present no one can be said to fill his place.

In leaving the profession, however, he has presented it with an "Atlas of the Diseases of the Membrana Tympani," consisting of 150 beautiful coloured drawings by hand. This splendid work is necessarily expensive, costing six guineas, and will therefore, only be purchased by specialists and public libraries; but the other work we have named (price 12s. 6d.) will be found quite sufficient for the use of the general practitioner.

PARASITIC EAR DISEASE.

Dr. Cassells, of Glasgow, has brought before the Medico-Chirurgical Society of that city a most interesting paper on this subject, which is published in the last number of the *Glasgow Medical Journal.*

Dr. Cassells was the first person to discover the aspergillus fungus in England. Until he published his first case last year, it was generally believed that this disease did not occur in this country, although it was known to exist in Europe and America. He has now had several cases, and his "Sketch of Diagnosis and Treatment" is a valuable contribution to Otology. We may add that his paper has been reprinted under the title of "Myringomycosis Aspergillina" (Glasgow, Dunn and Wright).

ON THE ARTIFICIAL PERFORATION OF THE MASTOID PROCESS.

The history of this operation has been well told by Drs. Schwartze and Eysell, and their account of it has been translated by Dr. A. Schapringer for the *Med. and Surg. Reporter.* We give an abstract of it :—

This operation has been termed "Jasser's Operation," owing to a general belief that a Prussian military surgeon of that name first performed it in the year 1776. Forget, however, showed (*a*) that Jean Louis Petit, who died 1750, had preceded Jasser in performing this operation. In his "Traité des Maladies Chirurgicales," published in the year 1774, after the author's death, we find allusion made to it in two places. The first is rather obscure, but the second case, one of abscess behind the ear, where he trephined the apparently healthy bone, he relates in the following words :—

> "J'appliquai le perforatif sur l'os qui parassait sain à cela près d'une rougeur érisipélateuse dans l'étendue d'un quart d'écu : à peine eus-je usé la table externe, qu'il sortit une sanie puante et séreuse ; l'exfoliation se fit dans son temps, et le malade guérit. *On peut juger par là combien j'ai epargné de douleurs au malade, et de combien j'ai abrégé sa guérison.*"

Jasser (*b*) evidently had no cognisance of Petit's publications, when he, guided by chance more than by anything else, entered a probe into a carious mastoid bone. He was much scared when he saw that the fluid which he injected through the opening of the bone escaped through the nose, which proves that he was not well versed in the anatomy of these parts of the body when he performed the operation, and, by it, cured his patient of a painful and dangerous disease. Encouraged by his success, he persuaded the patient, by money and arguments, to have a similar operation performed on the other side, too, where he was hard of hearing, from an otorrhœa of old standing. Here the mastoid bone was not softened, and he had to perforate it by means of a trocar, which he did, to use his own words, "in the centre of the mastoid process, somewhat towards the outer side, where the large cells take their origin." In this case, too, the result was cessation of the discharge and improvement of hearing.

Jasser's report created great sensation, and the most sanguine hopes as to the curability of deafness, from whatever cause. The conclusion of his report runs as follows : "If a patient should complain of deafness, and not be afraid of being cut or drilled, which, in that region, is not connected with any danger, I would, without hesitation, repeat the experiment." The operation being performed without clearly defined indications, it proved a failure in some instances—Hagstrom Proet (*c*)—in others it was followed by amelioration—Lœffler (*a*)—or even by complete subsidence of the morbid symptoms, on account of which it had been undertaken—Fielitz (*b*). Hagstrom first met with accidents, which were to be referred to the injection of powerful liquids into the interior of the bone, and not to the operation itself. Proet, in 1791, first observed dangerous febrile symptoms. In the same year the first case of death from the operation occurred at Copenhagen, which attracted great attention, as the victim was Dr. Baron von Berger, Physician-in-ordinary to the King. He died, as Boyer says, a martyr to the perforation of the mastoid process. He suffered from hardness of hearing, tinnitus, and dizziness, and, knowing some successful cases, insisted upon having the operation performed upon himself. It was performed by Drs. Kolpin and Callisen. Immediately after it tepid water and *spiritus ætheris Hoffmanni* were injected, and the injection repeated the next day. The fluid did not run down the throat. Fever, sleeplessness, and delirium set in, and death ensued the eleventh day after the operation. The autopsy revealed purulent meningitis ; the mastoid process was found to be small, solid, and almost without cells. Its thickness at the place of perforation was four millimetres, and, as the perforation had penetrated to a depth of one centimetre, according to Kolpin's statement, the brain had been injured. (*c*)

From that time the operation was discouraged, and became forgotten. When Dezeimeris, (*d*) in Paris, endeavoured to revive it, he had one fatal case too. He compiled the statistics of all cases where the result seemed to testify in favour of the operation, but could not bias his contemporaries in its favour. Itard, Bonnafont, and Rau unanimously condemn it.

Forget (1849), and afterwards Von Troeltsch and Follin (1859), published cases of otitis interna, with caries of the mastoid process, where it was successfully performed. A series of post-mortem examinations sustained the view that in many forms of inflammation of the ear this operation could be beneficial, and a number of cases were published by others.

It is now admitted that the operation answers an *indicatio vitalis* in cases of accumulation of pus in the cells of the bone, when symptoms supervene threatening the patient's life. J. Gruber (*e*) wants to restrict it to such cases where there is marked intumescence of the mastoid process; but this restriction seems open to serious objections. It must be admitted that in such cases there is no doubt about the diagnosis, but if we would always wait for this symptom to appear, we would often be too late. In doubtful cases the temperature of the body might well serve to substantiate the diagnosis, besides the other well-known symptoms, as violent pain in the ear and mastoid bone, which is increased by pressure, inflammatory and œdematous swelling of the

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(*a*) *L Union Medicale*, 1860, 52.

(*b*) See Schmucker's Vermischte Chirurg. Schriften. Berlin, 1782, vol. iii, p. 113.

(*c*) Ueber die Durchbohrung des Zitzenformigen Fortsatzes bei Fehlern des Gehors.

(*a*) Richter's "Chirurg. Bibliothek," vol. x., p. 615.

(*b*) *Ibid.*, vol. viii., p. 325.

(*c*) Beck, "Krankheiten des Gehororgans," p. 69.

(*d*) *Journal d'Expérience*, 1832, No. 38.

(*e*) See his "Lehrbuch," p. 549.

parts covering this bone, (*a*) and horripilations. The increase of temperature will hardly ever be found wanting. (*b*)

If fistulous openings have formed in the bone, they ought to be enlarged as soon as symptoms of stagnation of pus supervene, as already successfully done in several cases.

Von Troeltsch has, of late, tried to enlarge the field of this operation, (*c*) and to substantiate the assertion that there is no more efficient remedy in cases of prolonged otorrhœa, even when there are no cerebral symptoms, and the mastoid process is outwardly healthy.

Experience has shown that apparently insignificant cases of otorrhœa often terminate fatally, "when they are due to an accumulation and inspissation of mucus in the cells behind and above the tympanic cavity." (Von Troeltsch.) It is evident that the accumulating masses can be more thoroughly removed through an opening posterior to the ear than through the external auditory canal, even if a curved nozzle were introduced into the tympanic cavity, according to Von Troeltsch, a rather dangerous proceeding, as has already been pointed out by Wilde (see *Med. Times*, 1861, May 11th).

The danger arising from an artificial perforation of a healthy mastoid bone is not always so trifling as some suppose. We had no actually fatal case, but once there was such violent reaction (the temperature rose as high as 41.8° C.) that there was reason to fear for the patient's life. In some instances the bone proved to be solid to such depth that, as we were afraid to penetrate any further, the operation proved to no purpose.

THE INFLUENCE OF COLD AND SEA-BATHS ON THE ORGAN OF HEARING.

At the last meeting of the Association of Naturalists and Physicians, Dr. Guye (*Allgemeine Wiener Med. Zeitung*) showed that the injurious effects of cold are observed when the patient has attacks of giddiness in consequence of cold injections into the ears; if warmer water be then substituted there will be no return of the attacks. The opinions of aurists relative to sea-baths are very diverse. A few consider them injurious, and others, useful; Dr. Guye believes that he has solved this question, and lays down the rule for the differentiation of the cases in which sea-baths are indicated, from those in which they must be looked upon as injurious. In one class of cases he has found sea-baths not only void of danger, but of the greatest utility; in another series, they have either aggravated the existing aural complaint or have occasioned the first symptoms of a new one. The doctor considers the difference to lie in the fact that the attacks of dizziness which indicate labyrinthal disturbances are always absent in the former class, while on the contrary they were certainly present in the latter. Dr. Guye thinks, therefore, that such cases in which symptoms of disease in the labyrinth are already present, or in which there may be a predisposition to them (especially if it be a hereditary predisposition) contraindicate the employment of sea-baths; but that in all other cases (the necessary precautions being of course taken) they may be resorted to without danger.

AMERICAN REPORT ON OTOLOGY.

In the "Transactions" of Illinois State Medical Society there is a report on otology prepared for the Society by Dr. Samuel J. Jones, Professor of Ophthalmology and Otology in the Chicago Medical College, from which we take the following:—

The physician is often asked, by the laity, what care is necessary for the ear in health. In general terms, the proper answer is, none. The ear, like the other organs of the body, is so organised that, in health, it will take care of itself. When any one of its functions are so performed as to attract special attention, it is fair to assume that some abnormal condition exists, which renders it advisable that careful examination of the organ be made. The detection of the presence of an accumulation of cerumen in the external meatus is a frequent source of chagrin to patients, who conclude at once that its existence argues a want of proper personal cleanliness. Such is not, however, necessarily the case. When the ear-wax is secreted in its normal condition, the ordinary movements of the jaws work it to the outer portion of the meatus, when the use of the towel in the bath will remove it. When its removal in this way fails to occur, examination will frequently reveal an unusually dry condition of the skin within the meatus. This dryness, in a large proportion of the cases, seems to be attributable to chronic non-suppurative inflammation of the ear. The wax secreted under these circumstances seems to be deficient in moisture, and, when it accumulates there will be found mixed with it desquamated skin from the meatus—sometimes in quite large flakes; at other times, numerous small particles, and hairs that have been cast off with the epidermis. Having once begun thus to gather, the accumulation continues to increase; an additional portion of the watery part of the wax evaporates, leaving the mass harder. Gradually the meatus almost fills, and when illuminated there is a shining surface reflected, that has been mistaken, by those inexperienced in examining the ear, for the shining surface of the membrane of the drum of the ear. From this it may, however, readily be distinguished, by the fact that in the healthy membrane of the drum the reflected light shows itself in the form of a "triangular light spot" (which is absent when the membrane is opaque), whereas the reflection from a mass of cerumen is an evenly-shining surface. To the experienced eye inspection will readily detect its existence, and various symptoms—usual consequences—of its presence. would suggest examination, such as impaired hearing—imaginary noises in the

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(*a*) It needs hardly to be mentioned that inflammatory swelling in the region of the mastoid bone may also be due to genuine periostitis, without any complication in the middle ear.

(*b*) The results obtained by the auscultation of the mastoid cells, according to Laennec, are altogether unreliable. Ménière claimed to have recognised an obstruction of the mastoid cells by a bruit confined to the cavum tympani.

(*c*) See Virchow's "Archiv.," vol. xxi, p. 295, and Pitha and Billroth's "Handbuch der Chirurgie," Krankheiten der Ohrs, p. 58.

ear—sometimes dizziness and unsteadiness of gait in walking, &c. When its existence has been discovered its removal may be most readily effected by syringing the meatus with some alkaline solution—alkalies being the most effectual solvent of the wax. Whatever fluids are injected into the meatus, their temperature should be very nearly that of the blood, to prevent either dizziness or inflammation resulting. Often this mass of wax is firmly adherent to the small hairs in the meatus which have not been cast off, and should an attempt be made to remove the mass by force, such violence may cause diffuse or circumscribed inflammation of the meatus. When this removal shall have been effected, inspection shows the unhealthy condition of the meatus. If the condition be one of dryness simply—such as occurs very frequently as an accompaniment of chronic catarrhal inflammation of the middle ear—lubricating the meatus with a solution of biborate of soda, with a small amount of glycerine and some carbolic acid added, is generally sufficient to save the patient much annoyance, and prevent a recurrence of the trouble until the removal of the primary cause affords entire relief.

The removal of foreign bodies from the meatus is often best effected by syringing—having first ascertained by inspection that such foreign body is present. If the foreign substance be an insect it can often be dislodged simply by filling the meatus with water, and thus cutting off its respiration; and in this way violence to the ear may be avoided. A word of caution regarding the use of an instrument designated an "aurilave," which is now being extensively vended, may not be amiss. Its construction is such that the piece of sponge that is attached to the end of the stick, when introduced into the meatus, forces the contents of the meatus before it, causing an impaction of the wax, epidermis, and loose hairs, in the inferior portion of the meatus, and often against the membrane of the drum of the ear.

The injudicious use of the nasal douche is also an occasional source of injury to the healthy ear, producing acute inflammation of the middle ear, and perforation of the drum membrane. When being used the top of the column of fluid in the reservoir should be but a few inches above the nose.

Further observation seems to indicate very conclusively, that the ear, in health, possesses considerable power of accommodation, which fact may be taken advantage of to develope the power of hearing by systematic exercise, where any impairment exists.

Often the first departure from the condition of health, in the ears, which persons detect, is impairment of hearing, and of this they are accustomed to speak as a disease, instead of a consequence of disease. They often ask if their "deafness" is not hereditary, and state that certain other members of their family were sufferers from impaired hearing. Hereditary deafness, if possible, is certainly not of frequent occurrence, which fact, if more generally understood, would save much needless apprehension.

Professor Voltolini, of Breslau, has described what he calls "otitis labyrinthica," which occurs chiefly in children, and resembles in many respects the consequences which we have been accustomed to consider as cerebro-spinal meningitis.

It is a noticeable fact that the cases of deafness following cerebro-spinal meningitis seem to occur chiefly, if not exclusively, among quite young persons, and certain characteristics which he ascribes to otitis labyrinthica should lead us to examine more closely our cases of supposed cerebro-spinal meningitis. In these cases the general practitioner has opened to him a large field of usefulness. The aural surgeon usually sees these cases only after all change has occurred, and loss of hearing has resulted, and an effort is being made for its restoration. More careful observation is needed in the beginning, and during the progress of the disease, and further, post-mortem examination of the labyrinth in fatal ones, to understand these mysterious cases. One of the embarrassing consequences of these diseases of the labyrinth is the persistent tinnitus aurium. This ringing occurs under various circumstances and from various causes, so that treatment must, in each case, depend upon the cause which produces it. In some cases, where it was supposed to depend upon abnormal tension of the tensor tympani muscle, division of that muscle through the membrana tympani is said to have given relief.

Your Committee would invite especial attention to acute inflammation of the mastoid cells, which is occasionally mistaken for erysipelas. The peculiar redness of the skin over the mastoid process, in these cases, is not unlike the appearance of erysipelas in its early stage. It is an error which occurs like that in acute inflammation of the lachrymal sac, and sometimes leads to disastrous consequences. It is sometimes mistaken for circumscribed, or even diffused, inflammation of the external meatus, which should not occur if the parts be at all carefully inspected. If the disease be recognised in its early stage the application of a few leeches over the mastoid process will generally prove sufficient to check its progress. If, however, the case be only seen at a later stage, when pus has formed, the sooner puncture is made and the pus evacuated the greater will be the safety to the patient. An anxious expression of countenance, in addition to the excessive pain accompanying this, characterises it. Where discharge exists as a consequence of this inflammation, and escapes, either through a spontaneous or artificial opening, its removal should be hastened by thorough syringing with some astringent solution, as in the treatment of a discharge from the meatus. Regarding such discharge from the external meatus—so-called otorrhœa—there is a popular error that it is dangerous to check it, lest metastasis to the brain occur. For fear that some such result might follow the checking of the discharge, it is allowed to continue for years, at the imminent risk to the life of the patient. That discharge is but a consequence of some pathological condition—usually the result of some acute or chronic inflammation—which should be discovered and removed, when the consequence will disappear with the removal of its cause. In every instance, without exception, where such discharge from the ear exists, an effort should at once be made to remove its cause. If there be perforation of the membrane of the drum of the ear accompanying it, on the disappearance of the discharge a decided tendency to closure of the opening in the membrane of the drum will manifest itself—contrary to the generally received opinion on that point. Where the edges of the opening are in apposition, or approximate it, the opening heals readily; if the opening be circular, or the edges wide apart, it may become necessary to cauterise them and start a granulating surface to fill the opening; but the tendency to repair is much greater than is generally supposed.

ABOUT BOOKS.

A Handbook of Therapeutics. By Sydney Ringer, M.D., Professor of Therapeutics in University College, Physician to University College Hospital. Fourth Edition. London: H. K. Lewis, 1874.

We never have been able to understand why this book should have been so successful. As a manual of materia medica for students—and it was as a class-book that it was first published—it is both defective and misleading, and some of its faults increase with each successive edition. It was originally founded on Buchheim's work. Indeed, Dr. Ringer followed that author so closely that the English volume presented neither novelty nor originality. In the second edition additional matter was incorporated, and the author stated that the work was "specially intended for students and young practitioners." We should rather have said that, while experienced practitioners might find in it a number of practical suggestions, younger ones would find it very confusing; while as for students, we firmly believe that those who trust entirely to this handbook for their materia medica and therapeutics would, at any of our examining boards, probably be plucked—and deservedly so.

The book is full of crotchets, and is, of course, very unequal. Some of Dr. Ringer's favourite remedies are expatiated upon at great length, as, for example, ipecacuanha, which occupies 17 pages, in which we naturally find a *rechauffé* of his recent article on its use in the form of spray, and a tediously long account of the forms of vomiting in which minute doses have been given. For his use of this remedy, and, indeed, various others, the author has been frequently taken to task by homœopathic writers. We have no sympathy whatever with the claim to the exclusive right of using certain drugs set up by homœopaths, but we must admit that when some of their leading principles are adopted, or when remedies are recommended which they only have previously employed, it is but fair to acknowledge the fact. This Dr. Ringer escapes doing by systematically omitting references, and writing, as a rule, as if he himself were the originator of plans of treatment which have been published by others before him. Even when he refers to names he never mentions the book or journal, and he often gives to living men the credit of originating remedies a hundred years old or more; *e. g.*, in the article on acids he actually tells us that Dr. George Bird, the gentleman who has corrected Dr. Ringer's proofs, "finds glacial acetic acid very effectual in removing warty growths." We are glad to observe in the new edition that a few names are cited, and amongst these we notice two homœopaths, viz., Dr. Bayes and Dr. Richard Hughes. We congratulate Dr. Ringer on being courageous enough to acknowledge at last the source of some of his remarks, and we hope that, in future, he may venture on a further act of justice.

We have said that the work is defective as a handbook for students. In proof of this we have only to state that it contains no reference whatever to various substances mentioned in the British Pharmacopœia, and of course, a student is likely to be examined on any of these. We may add that, though many drugs are treated of at considerable length, others are dismissed with a few most inadequate remarks. An instance of this is to be found on the first page, where oxygen is stated to be rarely employed in medicine. We are told that "it has been recommended in the non-febrile forms of phthisis," but the author appears to be totally ignorant of the writings of Dr. Andrew Smith, of New York, and other American physicians who have extensively employed this gas, to say nothing of English practitioners who have followed their example. He does not mention ozone, nor does he refer to fresh air. He tells us, however, that "according to Beddoes and Démarquay, it is useful in asthma, but if co-existing with heart disease they disadvise (*sic*) its employment."

Having mentioned its local application, we come to the next article, "On the Internal Use of Water," where we find the following profound observation:—

"Toothache may often be greatly lessened, and even removed by rinsing out the mouth for some minutes with water as hot as can be borne; but sometimes cold succeeds better than hot water."

From this the author passes to the drinks best suited for fever patients, thus anticipating, in some degree, the formulæ he gives at the end of the work under the title of "Dietary for Invalids." A little further on it is stated that "water is necessary both for the digestion and solution of food, but an insufficient, as well as too large a quantity, are alike harmful."

Concerning peroxide of hydrogen, Dr. Stohr's observations on its effects on venous blood and pus are quoted, and we are told that it has been applied with decided advantage to chancrous sores and buboes; but there is not a word about its powerful oxidising property, nor is ozonic ether mentioned. We are, however, informed that "internally, it is reputed to be a disinfectant, and slightly stimulant."

Sulphur and its compounds are discussed at great length, as well becomes an author who draws so largely on homœopathic writings. Dr. Ringer is well known to attribute "decided influence over the suppurative process" to the sulphides. He says this influence "is easily made manifest" by the improved character of the pus. He even goes so far as to state that "the sulphides appear often to arrest suppuration," and he gives 1-10th of a grain with one grain of sugar of milk for a dose in enlarged glands, mammary abscess, boils and carbuncles, scrofulous sores, and even diseases of bone (page 73). He says:—

"In carbuncles the sulphides will generally be found equally serviceable, melting, as it were, the core into healthy pus, and so quickly expelling the dead and otherwise slow-separating tissue."

As to bone-disease, sulphides are said to be indicated when the phalangeal bones of the hand or the metatarsal are attacked. We read:—

"Thus, before suppuration has set in, or whilst it has made little way, they (the sulphides) often remove the swelling, though large doses may be required. After much suppuration their good effects depend, in a great measure, on the amount of the disease of the bone. If the whole shaft becomes necrosed, of course, the sore will not heal till this has been got rid of; but suppuration often occurs, and yet but little, or perhaps none, of the bone dies.' In such a case the sulphides hasten the expulsion of the pus, and if, before they are employed, the skin is already broken, they improve the character of the wound and the discharge, and the sore heals, leaving a sunken scar adherent to the bone, whilst the finger slowly assumes its natural proportions."

We have thought well to quote Dr. Ringer's exact words on this subject We have tried the sulphides in numerous cases of glandular disease such as he describes as most suitable for the remedy, but we have been so thoroughly disappointed that we should be very slow to trust to it where the bones are affected.

To the 4th edition Dr. Ringer tells us he has added chapters on phosphorus, croton-chloral, and hamamelis.

Turning to these, we are told with regard to phosphorus that "for many years this substance has fallen into disuse, but quite recently, owing to its signal success in neuralgia in the hands of homœopathic practitioners, it has been restored to favour." Then follows a précis of the results obtained by Wegner, Ebstein, Thompson, and Anstie.

As to croton-chloral, the views of Liebreich, Legg, and Yeo are quoted. We find nothing else, except that a headache due to affection of the cutaneous nerves, accompanied by tenderness, may be cured by croton-chloral, but this often leaves a "stupid headache," which may be relieved by bromide of potassium. This last drug is also said to relieve people who "feel as if they should go out of their mind." This, it will be remarked, is essentially a treatment of symptoms, and we may say that the characteristic feature of Dr. Ringer's work is that it reduces therapeutics to the art of combating symptoms with drugs. This, it will be remembered, is also the leading feature of homœopathic practice. Hence it is not surprising, especially considering the other indications of his leaning, that Dr. Ringer has been accused by homœopaths of stealing their thunder. Our own objection to this method is that it ignores pathology, and limits the art of healing to the most superficial empiricism, and we think that a work on therapeutics in which pathological facts are scarçely alluded to is unworthy to represent English medicine.

In support of what we have stated we may mention the chapter on digitalis, which is one of the very best in the book. This does give a summary of the views of modern writers, in which, of course, are many pathological allusions, but at the close of these we read (p. 449) the following :—

> "The author believes that we obtain better indications respecting the advisability of using digitalis by considering all the symptoms rather than by confining the attention simply to the nature of the valvular affection, and therefore heart diseases in which the drug will prove useful and those in which it will be found of little or no use will be fully described."

Thereupon we are treated to a series of descriptions of cases made up of groups of objective symptoms. We believe such a method of practice to be retrograde. Unquestionably we may often be reduced to the necessity of prescribing for urgent symptoms, but it is always unsatisfactory, and all modern progress in therapeutics is indissolubly linked to successful investigations into the nature of disease.

The last new chapter mentioned by the author in his preface is on hamamelis, or the witch hazel, long in vogue in America, it is said, as a useful remedy in passive hæmorrhage. Dr. Ringer says he has known it "arrest hæmaturia in four cases which had resisted many other remedies." He has also found it singularly successful in piles. He says "the dose is one or two minims every two or three hours," but he gives no indication whatever of what preparation he is speaking. This carelessness reminds us that throughout the work the question of dose is treated in a most unsatisfactory manner. Dr. Ringer has a great *penchant* for small doses frequently repeated. Thus he tells us that a sixth of a grain of grey powder, given at first hourly, and then every two hours, is of great service in infantile diarrhœa; but he does not say whether this treatment is to be carried out by night as well as by day. We are quite ready to admit that many drugs, especially those which are rapidly excreted, are best given in small and frequent doses, but when given every hour, especially to children, it is certainly most desirable to give instructions as to the number of doses that may be taken, for whilst one anxious nurse will continue the remedy day and night, another will reckon only seven or eight hours in the day; and Dr. Ringer sometimes advises small doses of powerful drugs to be taken even more frequently, *e.g.*, on page 434, so potent a poison as aconite is recommended to be taken in doses of half a drop, or one drop of the tincture in a teaspoonful of water, every ten or fifteen minutes for two hours and afterwards hourly. We beg to ask—How long afterwards is it to be continued hourly, and whether it is to be taken by night as well as by day?

Sometimes the groups of symptoms arranged by Dr. Ringer are, according to him, relieved by two drugs of very different quality; thus, under arsenic, he gives symptoms of chronic dyspepsia and diarrhœa, which, he says, a few days' use of arsenic will dispel (page 254); but precisely the same set of symptoms are said (page 525) to yield to small doses of opium. This is confusing—at any rate for a *student* who trusts to symptoms as indications for treatment. These two drugs are so frequently prescribed together that we almost feel inclined to ask whether Dr. Ringer usually combines them.

We feel much inclined to question the propriety of grouping together castor-oil and croton-oil, especially without more distinct warning as to the great difference in the doses of these drugs. For practitioners the point is of little consequence, but for young students it is rather important. Taken as a whole, this is the defect of the work. While there are many chapters that may be read with interest and profit by men with experience to guide them, they are unfortunately buried in a mass of useless matter, and by the inexperienced the book is best avoided. It seems to us a pity that the author, who can do and has done much better work, should not have communicated to the profession his own views on therapeutics by themselves, instead of setting himself to compile a handbook of the whole subject.

The volume closes with twelve pages of formulæ for foods and beverages for invalids, in fact, a kind of Invalid's Cookery Book, in which bread-soup, panada, rice-cream, various puddings, lemonades, milk-drinks, caudle, gruel, and numerous other recipes find a place. They will be found useful, no doubt, to many; but in a professedly scientific work they appear like a bid for popular support. This appearance is considerably reinforced by the two indices; the first, "an index of medicines," occupies two pages, whilst the second, "an index of diseases," fills 18 pages, and this extent is required by the introduction of the popular names for diseases. Thus, we were not a little surprised, in a work professedly addressed to medical students, to find in this index such popular terms as acidity, ague, back-pains, barrenness, (a) bilious headache, bruises, cankery taste, chapped hands and lips, cold feet, cold in head, confinement, (b) crick in neck, despondency, deodorizers (Are these diseases?), feverish cold, flushings, hiccup, itch, lice, piles, sores, stoutness, thirst, teething, toothache, warts, and worms. Can it be that the Professor at University College, London, wishes his book to circulate amongst the public, and that extra-professional patronage has carried it to a fourth edition?

The Patent Question in 1875: *the Lord Chancellor's Bill, and the Exigencies of Foreign Competition. With a Suggestion as to Copyright.* By R. A. Macfie. London: Longmans, Green, and Co.

Mr. Macfie's pamphlet, which has reached us, will not possess great interest for the profession, inasmuch as it is not the custom to patent inventions for the relief of disease. It would seem, however, that medical liberality in this respect is not without a parallel in the commercial world, for we read :—

> Again one is refreshed to learn that the stupendous "progress of the German beet-root sugar production rests mainly on the circumstance that the manufacturers have united into

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(a) The observation to which reference is made is, "Barrenness has yielded to iodide of potassium. It is to be presumed that sterility thus caused was due to syphilis."

(b) Is this a disease?

a society, and the members immediately communicate to each other all the improvements discovered in their factories by publishing them in the journal of the society. Instead of taking advantage for themselves from the temporary enjoyment of a manufacturing secret, they give it in exchange for the common advantage of the discoveries made in all the other factories." This is given in a report made on behalf of German engineers, by the propatent Dr. Klostermann. But much the same is the honourable habit of Scottish agriculturists and stock-rearers. How encouraging are both examples.

Mr. Macfie would abolish patents, but with respect to copyrights, which perhaps interest the profession more closely, he would substitute a system of royalties. We do not think the question of great importance to medical authors, whose works, as a rule, are profitable only to the publishers, and those tradesmen have always proved themselves fully capable of taking care of their own interests.

The Sanitary Journal, edited by Dr. Edward Playter, is published bi-monthly in Toronto. The first five numbers have come before us, and we are glad to see that Public Health is so well represented in Canada.

WE have also received the recent numbers of an Italian journal devoted to Sanitation, published at Genoa, and entitled *La Salute*.

AT THE SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, FEBRUARY 23RD, 1875.

Dr. C. J. B. WILLIAMS, President, in the Chair,

CONTRIBUTIONS TO THE HISTORY OF LARYNGEAL PHTHISIS.

By WILLIAM MARCET, M.D., F.R.S.

DR. MARCET divided his paper into two parts; the first being a short account of the history of laryngeal phthisis, and the second a record of his own observations on the subject. The second part began with a remark that laryngeal phthisis is both a symptom and an extension of a pre-existing disease. It is a symptom, because, when its existence is clearly established by larngoscopic examination, there is no doubt that the lungs either are or will shortly become tubercular, if not obviously so at the time; it is an extension of a disease, because, as a rule (he did not say invariably, although it may be so), the pulmonary tissue first becomes the seat of tubercular growth, mischief appearing subsequently in the larynx. The author's former connection with the Hospital for Consumption and Diseases of the Chest at Brompton had given him a wide field for the investigation of laryngeal phthisis, of which he had availed himself; and he reported in a tabular form 70 cases of disease of the larynx in phthisis, in which both the physical signs of the chest and laryngoscopic appearances were faithfully recorded. This formed the groundwork of his communication. The author inquired into the main predisposing cause of laryngeal phthisis; and, after examining the various trades and employments recorded in 57 cases, came to the conclusion that excessive use of the vocal organ is hardly, if at all, a predisposing cause of that affection. Out of the 57 cases, 30, or a proportion of about 53 per cent., were employed on indoors or sedentary and home work; while, of 309 cases of phthisis attended by the author at the hospital in 1869, all of which were free from laryngeal disease, about 80 were employed on indoor and sedentary work, giving a proportion of 26 per cent. It would therefore appear that sedentary and indoor work has a marked influence as a predisposing cause of laryngeal phthisis. A case was recorded, however, where the disease broke out in a butcher's assistant, whose business it was to call out the weights of the meat on the scale. This appears to be a very laborious work for the vocal organ. It was remarkable that there was not a single hawker on the list of cases of laryngeal phthisis. Deficient out-of-door exercise and want of pure air together, it might safely be added, with neglect of the rules of hygiene and mental anxiety, are the main predisposing causes of laryngeal phthisis. The disease, therefore, appeared to be a low form of consumption, and requires as much attention to be paid to the general state of health as to the local mischief, if not more. The author next alluded to a state of weakness of the muscles of the vocal cords occasionally met with in consumption, without there being any organic change in the larynx; and observed that in these cases the tensor muscles of the cords appear more often affected than the adductors, while in hysteria the latter set of muscles are more commonly at fault. Cases were given illustrating both kinds of affections. He afterwards described the appearance of the larynx in laryngeal phthisis, and insisted on the presence of a whitey milky, probably purulent, mucous fluid in the laryngeal cavity as a means of diagnosis of phthisis. The prognosis, where organic disease is detected in the larynx, in cases of consumption, is not favourable; still, much can be done towards relieving the pain and distress in the throat. The author then stated that there is nothing contagious in laryngeal phthisis, although the expired air from the chest of a person suffering from the disease may be peculiarly irritating to the throat of another in good health. He thought that this irritating property of inspired air equally applies to phthisis, without any affection of the larynx; indeed, he found the air expired by a healthy individual often irritating to the larynx of another person. He cited his own experience on the subject, and remarked that his throat frequently suffered from irritation in consequence of his being called upon to breathe near the mouths of his patients while using the laryngoscope in a succession of cases. Some remarks followed as to the unhealthy character of expired air in other respects; and the author then described the treatment. The application to the larynx of a solution of iodine in olive-oil, or of bromide of potassium in glycerine and gum-water, relieved the pain; and scarifications, when the larynx was much swollen, proved beneficial. Inhalations of iodine were also sometimes used with advantage. When the larngeal mucous membrane was neither ulcerated nor much swollen, faradisation of the muscles of the larynx often succeeded in improving the voice. A few remarks were here introduced on climate. The author believed that, wherever those who suffer from consumption in an acute form may be living, except, perhaps, if residing high up in the mountains, they will, as a rule, derive benefit from removing to a place higher up, although, perhaps, not distant from their residence, and possibly not more than from one hundred to three hundred feet above it. The post-mortem changes in the larynx were shortly noticed, and then the author considered the cases he had brought forward. He related the history of two patients with laryngeal affections, who both recovered; one of them exhibited rather suspicious symptoms of phthisis, while the other case was one of acute laryngitis, with aphonia accompanying pulmonary congestion. The conclusions derived from the consideration of the table of 70 cases of diseased larynx in phthisis, in all of which the physical signs of the chest were reported, were as follows: 1. More men than women were affected, in the proportion of about two of the former to one of the latter. 2. The ages recorded in 55 instances appeared to show that most cases of laryngeal phthisis are met with between the ages of 20 and 30 years, or at that of 30 and above 20. Dr. J. E. Pollock states ("Elements of Prognosis in Consumption") that there is a large preponderance of cases of phthisis between those ages; and therefore, as far as age is concerned, the predisposition appears to apply equally to consumption, whether the throat be affected or not. 3. Out of 70 cases of phthisis, in which the larynx was affected, eight of them exhibited no visible organic change, with the exception of slight redness with congestion in two of the eight cases; tension of the vocal cords was deficient in five; in the three other cases, adduction of the cords was deficient in two, and abnormal in one. 4. In 31 cases out of the 70 the epiglottis was affected (a statement of the nature of the change in every case was given). 5. Only 13 cases were recorded of positive ulceration of the larynx out of the 70—this proportion appearing rather smaller than might have been anticipated. Patients with laryngeal ulcerations are, as a rule, older than those whose larynx, although affected, is not ulcerated. The mean age of the patients suffering from ulcerations in the larynx was 38 years, while the mean age of those whose larynx was free from ulceration was 29·7 years; the author concluding that want of nutrition due to age appears to act as a predisposing cause of laryngeal ulceration. 6. Dysphagia, or difficulty in swallowing, was noted in 14 cases; but this symptom may, perhaps, have existed in others, although not recorded. As a rule, there is pain and dysphagia whenever the epiglottis is affected; although, where that organ is merely congested and streaked (without being indurated) by the presence of enlarged vessels, the discomfort may be very slight indeed, and hardly noticed by the patient. 7. Aphonia, or some alteration of the voice, was reported in 59 out of the 70 cases. Of the other 11, it was concluded from the state of the larynx that the voice was probably weak or otherwise affected in 9.

The **President** had seen many cases of laryngeal phthisis, and agreed with Dr. Marcet, that it was rather a modification of ordinary phthisis than a disease in itself. The complication was a serious aggravation of phthisis, and hastened the fatal termination by adding distressing symptoms and interfering with the treatment. The cough was very harassing; it might be called a fruitless cough, as it was attended with little expectoration. The loss of voice had a depressing effect on the patient. There was also, perhaps more frequently than Dr. Marcet seemed to think, difficult or rather painful deglutition, often from ulceration of the larynx rather than of the epiglottis. When the epiglottis was diseased, the passage ef food over the glottis produced grievous irritation; hence it was necessary in such cases to give food in as bland a form as possible, so that a sufficient quantity might be taken; for the course of the disease was accelerated by any interference with nutrition. The general tendency of laryngeal phthisis was to hasten death; but he had known some exceptions in which, after indications of pulmonary disease were present, the larynx was attacked, and became apparently the chief seat of disease. He referred especially to one case of the kind where, although there were at first distinct symptoms of pulmonary disease, nothing was found in the lungs after death but a few patches of withered tubercle, while the larynx not only presented extensive tubercular disease, but there was necrosis of the cartilages; but such cases were exceptional. Constitutional remedies were very important; cod-liver oil, &c. He had been much disappointed in treating laryngeal phthisis, and, indeed, chronic laryngitis, by local remedies. In most cases nitrate of silver and similar articles did more harm than good. In a few cases, the application of nitrate of silver by Dr. Horace Green's method had been useful; but he had met with so many failures from this treatment, that he had laid it aside. The use of spray was more applicable, and sometimes more successful; but even with this the results had fallen short of his expectations. He concluded that it was only in a limited number of cases that these remedies were useful. Spray should be used in summer and hot inhalations in winter; he had found the use of spray in cold weather injurious. A weak solution of carbolic acid in the form of spray was useful; it acted as a soothing agent, and as an alterative of the secretion. He agreed with Dr. Marcet as to the offensive and acrid nature of the exhalation from the larynx in the disease; and for the correction of this, creasote, carbolic acid, and the oil of the *Pinus sylvestris*, were useful. Sometimes a very weak solution of nitrate of silver, of sulphate of copper, or of acetate of lead, allayed the irritation for a time. Inhalation was useful in cold weather; but it must be remembered that it was liable to produce perspiration, and hence the patient should be cautioned not to use it except at bedtime and when he was not exposed to cold. The various forms of inhaling apparatus showed much ingenuity, but the tubes were generally too small; they ought to be twice or three times as large. A simple and useful form which he employed was a jug of hot water containing the medicinal substance to be inhaled, the patient inhaling under a napkin lying over his face and covering the jug. The medical substance to be inhaled must be volatile; it was sometimes recommended to add non-volatile metallic salts to the water; even iodine was volatised with some difficulty. In general, creasote or carbolic acid, with hemlock, or in some cases chloroform, were most useful. The recommendation to use iodine both internally and externally deserved consideration. Many remedies might be given in oil or glycerine which were too irritating to be administered in other ways. Even water-vapour itself, in the form of spray, was irritating to the larynx, and of course more so when containing other substances; hence the addition of oil and glycerine was worthy of consideration.

Dr. **Drysdale** said that it seemed to him, from observation of many cases, that the prognosis in laryngeal phthisis was fatal, except where the patient could go to a warmer climate; and, under these circumstances, he had known a few cases where life had been prolonged for years, just as in other cases of phthisis. As a general rule, he thought that the course of laryngeal phthisis towards death was very rapid. He had seen relief produced by the inhalation of iodine vapour. As to the diagnosis, there was a difficulty, as had been well pointed out by Dr. Marcet, in distinguishing between laryngeal phthisis and syphilitic disease of the larynx; especially in such cases as one to which he referred, in which laryngeal phthisis occurred in a patient who presented distinct signs of syphilis.

Dr. **Thin** had visited Salt Lake City, and obtained some information from a medical man there. The plateau on which the city stood was about four thousand feet above the level of the sea. Among the native white population, he was informed, phthisis never occurred. Among the converts to Mormonism who came from the eastern parts of America and from Europe, there were sometimes persons, especially women, who had slight symptoms of phthisis before setting out; during the journey, the disease often became much aggravated; but after their arrival, unless they were in the very last stage of the malady, arrest and cure of the disease almost invariably took place. He believed that this fact was not generally known. He doubted the propriety of making scarifications of the larynx in laryngeal phthisis, as he believed that the resulting effusion might become a source of tuberculous growth.

Tuesday, March 9th, 1875.

Sir James Paget, Bart., F.R.S., D.C.L., LL.D., in the Chair.

URINARY CRYSTALS AND CALCULI; BEING OBSERVATIONS ON SOME OF THE CIRCUMSTANCES DETERMINING THE FORMS OF CRYSTALLINE DEPOSITS IN URINE, AND ON SOME OF THE CONDITIONS UNDER WHICH RENAL AND VESICAL CALCULI ARE PRODUCED.

By William M. Ord, M.B.Lond., M.R.C.P.

1. The starting point of the paper was the remarkable difference between the crystalline form of pure uric acid and the form of uric acid in urine; the former being in oblong rectangular tablets, the latter in rhombohedra with rounded obtuse angles; the former in separate crystals, the latter very often in zeolithic masses. After a brief notice of former observations showing that uric acid deposited in the presence of albumen and other colloids tended to assume spherical form, and in the presence of sugar and other crystolloids, tabular and angular form, a series of experiments having for their object the determination of the causes of the altered form of urinary uric acid were related. The conclusions drawn from these experiments were that mucus and the colouring matter of the urine were both agents in producing the ordinary urinary form of uric acid; that either agent was capable of exerting this influence without the presence of the other; that these were probably the sole agents in ordinary urine. 2. The forms of uric acid in albuminous urine were next considered. It was remarked that, while they tended generally to sphericity, they varied much in the degree of their tendency. It was inferred from a series of observations which are related in a generalised form that a larger proportionate quantity of urea in albuminous urine constituted *pro ratâ* an obstacle to the sphere-forming process. 3. Two forms of uric acid were noted as occurring in sugary urine; one a flat rhombohedron, with chiselled ends; the other a sid-sided tablet, with sharp ends, the latter being a rare form. 4. Purulent mucus was shown to have a great power of converting uric acid to sphericity, and of causing aggregation of spheres into calculi. Dr. Vandyke Carter's observations on the structure of calculi were referred to, and it was argued that the experiments now related agreed from the synthetic point of view with his analyses. The influence of colloids, and particularly of mucus, in favouring the formation of calculi within the urinary passages, was inferred to be of first importance, and much worthy of regard as bearing upon practice. Uric acid and other crystalline substances did not of themselves tend to form calculi, but were moulded by the other constituents of the urine. The part taken by the temperature of the body in furthering the process was discussed and regarded as important. 5. The forms of urates, and the influence

upon them of chlorides, albumen, and mucus, were next noticed; mucus in a high degree, and albumen in a less degree, were noticed as favouring the formation of spheres, chiefly in association with a concentrated condition of the urine. This particularly applied to the spherical form of urate of soda observed by Golding Bird, Thudichum, Beale, Roberts, and others. 6. As to oxalate of lime, the formation of dumb-bells under the influence of colloids, already elsewhere suggested by Dr. Beale, and described by the author, was referred to, and several cases of spheroidal modifications of oxalate of lime in urine containing colloids were brought forward. 7. Triple phosphate was much less easily moulded by colloids than the substance hitherto treated. But it was shown that mucus, aided by warm temperature, could and did modify triple phosphate towards sphericity, and favour calculous deposit. And the forms obtained under such circumstances agreed in a remarkable way with the forms of triple phosphate found by Dr. Vandyke Carter in calculi. 8. The influence of albumen on the form of nitrate of urea was noted. 9. With regard to the bearing of the foregoing observations on micromorphology, it was urged that, in the microscopy of the future, beyond recording the forms of the tissues, observers would interpret the meanings of forms, compelling form to tell the story of growth and function, following out the relations between form and substance, and proceeding to the discovery of the laws of tissue-formation.

MEDICAL SOCIETY OF LONDON.

MONDAY, MARCH 5TH, 1875.

DR. C. H. F. ROUTH, the new President, took the Chair, and delivered his presidential address after a few prefatory remarks, in which he considered in what manner a medical mind could best regulate medical work. Referring first to the Divine attributes and character of mind, he pointed out how strange it was that amid much great and noble work done, yet the mind had in many instances fallen far short of its powers. In religion, in law, and in medicine, there were marked evidences of error, although in the end truth generally prevailed; but in the progress of advancement much violent commotion took place—in medicine especially. In tracing the causes of these, he believed, 1st, this was due to a sort of moral Darwinism in its professors, who were prepared for progressive development, but opposed to abrupt and lofty transitions.

Another cause which had arrested progress was that we were apt to take too material a view of medical science. Facts were often material, but it was the manner in which they were used and explained which made the science. The same facts might be very differently construed. The struggle was one of *mind*, not *matter*. Hence, in the confusion some became so wedded to matter that they actually looked upon mind as matter, and thought as a cell secretion or force developed. Combating this view, he pointed out that no matter had yet developed any force akin to instinct, still less to mind. A chemical experiment was very different from a vivisection. Medicines might act very differently on animals and man, on hot or cold blooded animals. Some diseases were obnoxious to animals and innocuous to man. Here were several varied platforms on which the medical mind might work. But to make anything of them at all, the power used must be mind upon the matter, and he was only successful as a practitioner who did so.

A third cause which had arrested progress was our great disregard to the discoveries of those who had preceded us. Having illustrated this by a number of examples, Dr. Routh concluded by a peroration pointing out the great discoveries of modern times, and looked forward to the grandest results in the future from the combined experience of the past and present.

Dr. JAGIELSKI then read an elaborate paper on

"SPIROMETRY," ILLUSTRATED BY A NEW INSTRUMENT, DIAGRAMS, AND TABLES.

JOTTINGS FROM JOURNALS.

SALIVARY CALCULUS.—A curious instance of salivary calculus, the impaction occurring in Wharton's duct, is related in the *France Médicale*. An incision being made, the tumour, which consisted almost wholly of the phosphate of lime, was readily enucleated. The case was under M. Cusio, and was treated at the Hôtel-Dieu. In the same journal is described an instance of elephantiasis of the penis, seemingly consecutive on stricture of the urethra.

ASPIRATOR.—M. Moncoq has produced such a modification of Dieulafoy's aspirator, two tubes proceeding from the lower portion of the cylinder, as to enable one to practise transfusion of blood without exposing the vital fluid to the atmosphere, or of incurring the risk of coagulation. The cardiac movement is further reproduced, and the risk of introducing air is not incurred.

HYGIENE.—A curious thing occurred in Paris recently, and is recorded in the *Progrès Médical*. A large portion of the drinking water of Paris is supplied by the Vanne. The water-pipes or aqueducts, however, being repaired with a mixture of pitch and benzine, rendered the fluid which they conveyed not potable, while the food in the preparation of which it had been employed had to be thrown out. It is a saddening circumstance that poisoned water is not always disagreeable to the palate, and that such water may prove the unsuspected vehicle of most dangerous ingredients. For generations the water conduits and reservoirs of Turkey have been lined with a paste composed of linseed-oil and fresh slaked lime, which does not at all affect the water conveyed, and which lasts a very long time. The water board administration in the French capital does not appear to have been aware of the fact.

ACTUAL CAUTERY.—When the actual cautery proves desirable in regard of its application to the neck of the uterus, and when galvano-cautery is not available, Dr. Bonnafont has recourse to the following:—

Nitrate of potash, 1 gramme,
Wood charcoal, 28 grammes,
Powdered gum Arabic, 4 grammes,
Water, as much as proves needful.

The foregoing is carefully mixed, and little sticks are prepared each the size of the little finger, and from five to eight centimetres long. When dry, one end of one of these sticks is lighted, and, by means of a glass or wooden speculum, applied to the exact spot; with due precaution the patient is unaware of what has been done. Cold water is then thrown in, a tampon dipped in glycerine is left *in situ* until the end of the month, when the cauterisation can be repeated, if required, just as in ordinary cauterisation.—*La Presse Médicale Belge.*

BRAND'S METHOD.—In respect of the treatment of fever by cold immersion, the so-termed method of Brand, the editor of *L'Abeille Médicale*, in a leader on the subject, thinks that in order to contrast the method of Brand with ordinary treatment, the results of a series of years must be collected and compared. The actual results so far, he considers, in conjunction with M. Ferrand, are at any rate not quite so favourable as to justify an indiscriminate resort to the method of Brand.

CARIES OF THE PETROUS PORTION OF THE TEMPORAL BONE.—A case of caries of the temporal bone with paralysis of the facial nerve and softening of the ganglion of Gasser is related by M. Tedenat, hospital interne. The subject was a young man of twenty-one, and his illness seemed to be the sequela of a severe attack of typhoid fever, which had confined him to his bed during the months of August and September. His sufferings were great. The *débris* of the ossicula appeared to come away from the ear, aided, however, by Politzer injections through the Eustachian tube, mixed up with grumous purulent matter. A large sequestrum of the petrous had formed, while the contiguous dura mater and cerebral substance itself were seriously implicated. There was also distressing vertigo, coupled with rotations of the entire body from the diseased to the healthy side. As there were extensive tubercular deposits in the lungs and pleura, it seems probable that tubercular deposits also extended to the bony structures of the cranium and soft portions of the inner ear, inducing thereby such structural cerebral changes as to lead to a certain and, unhappily, a painful death.

Belly Presentation.—Dr. Olivier, de Tence, records an instance, fortunately of most rare occurrence, of abdominal presentation at full term. Even after calling in the further advice of Dr. de Besse, of Montfaucon, the case was looked upon as one of encephalocele. The forceps were useless, and turning was attempted in vain. The bistoury, followed by the crotchet, were then had recourse to. Nor was it until the contents of the fœtal abdomen began to escape that the real nature of this singular case was appreciated. Of course, the residue of the fœtus was removed, after which the mother did quite well.—*Lyon Médical.*

Treatment of Mania by Subcutaneous Injections of the Acetate and Hydro-chlorate of Morphia.—This treatment was followed up at Illenau, where MM. Roller and Hergt were led to its adoption by the idea that the patient in mania suffered. Four daily injections were made in the neck, shoulder, and arms, severally and alternately, giving the preferance, however, to a solution of the hydro-chlorate of morphia. M. Auguste Voisin, who had already suggested this mode of treatment, is very greatly, although we fear somewhat prematurely, prepossessed in its favour.—*Bulletin Thérapeutique.*

IN THE LABORATORY.

BENZOATE OF LITHIUM.

In the *Canadian Pharmaceutical Journal* Mr. E. B. Shuttleworth says that benzoate of lithium may be most advantageously prepared from the carbonate by the action of benzoic acid.

Mr. Shuttleworth gives the following directions for preparing this salt:—

In a Wedgwood dish put one ounce (avoirdupois) of carbonate mixed with nine ounces of water. Heat gently by aid of a spirit lamp, and add gradually, and by small portions, benzoic acid until effervescence is no longer produced. About three and a quarter ounces will be required. Evaporate to dryness, stirring constantly, and reducing the heat towards the close of the operation. The product may, for convenience, be powdered. The yield will be nearly three and a half ounces.

By following this process a much less quantity of water and consequently less evaporation will be needed than if the benzoic acid be dissolved and the carbonate added thereto. If, by reason of impurity or discoloration of the benzoic acid, it is necessary to filter the solution, three ounces more water may be added before evaporation; and, if required, a little purified animal charcoal may be used. The benzoate may be obtained in crystals by withdrawing the heat and setting the solution aside immediately after the benzoic acid is all added.

In Watts's "Dictionary of Chemistry" it is stated that this salt is uncrystallisable. Mr. Shuttleworth says that this is incorrect, and states that benzoate of lithium can easily be crystallized. He says that it takes the form of glistening pearly scales, or laminæ, "somewhat resembling iodide of cadmium, but less lustrous." The crystals were perfectly permanent in air. He found that the salt dissolved in 3½ parts of water at 60° F.; in 2½ parts at 212° F.; and in 10 parts of cold alcohol, sp. gr. 838. He found that the aqueous solution gave an acid reaction with test-paper.

Whilst on the subject of lithium salts we might remark that the citrate of lithium is incorrectly stated in the Pharmacopœia ("British Pharmacopœia," 1867, page 200) to be amorphous and deliquescent. This is not the case; it is crystalline, and *not* deliquescent.

NOTES, NEWS, AND GOSSIP.

A SAD CASE.

A surgeon has lately been convicted of manslaughter. It seemed that in attendance on a woman in her confinement rupture of the uterus occurred with protrusion of about fifteen feet of intestine. This large proportion of the alimentary canal the prisoner cut away. Sentence: *Six months' imprisonment.*

PHYSICIANS' SACRIFICES.

Prof. O. W. Holmes, of Harvard University, U. S., in an address at the opening of a new medical college, quotes a passage from the author of "Modern Christianity a Civilised Heathenism." It runs as follows: "Men are pleased to call you reverend," he says, addressing the English clergy, "but if such a title belongs to any profession on this earth, it belongs, not to the parson, but to the doctor. He it is who, in some degree at least, is making himself Christ to the suffering and sorrowing among mankind. He it is who turns out of his bed at midnight to cool the poor man's burning lips, or succour a woman with the tenderest efforts of his skill, who can never pay him sixpence for his trouble, whether her infant lives or not. What you do cheerfully enough once in a way, he does as amatter of business all day long. Your work is baby's work compared with his."—*The Clinic.*

USE OF MOSQUITOS.

We are informed by the *Boston Medical and Surgical Journal* that Dr. Samuel W. Francis, Fellow of the New York Academy of Medicine, has recently published a pamphlet, No. 3 of his medical series. It contains short articles on the term "syphiline" to indicate the syphilitic poison, on a glass glove or boot for the treatment of sprains or burns, on "Self-Opening Coffins and an Alarm Telegraph," &c. The longest paper is entitled "Man and Nature;" from it we abstract this paragraph: "It is my firm conviction that the mosquito was created for the purpose of driving man from malarial districts; for I do not believe that in nature any region where chill and fever prevail can be free from this little animal. Now if man will not go after warning is given in humming accents, then the mosquito injects hypodermically a little liquid which answers two purposes: firstly, to render the blood thin enough to be drawn up through its tube; and secondly, in order to inject that which possesses the principles of *quinine!*"

A LEECH IN THE LARYNX.

Dr. Gesualdo Clementi, of Sicily, was called on August 15th, 1874, to a woman who had been suffering for a fortnight from cough and hæmoptysis. She had always previously enjoyed good health, but was now quite aphonic, and suffered from attacks of severe dyspnœa. Consultation revealed nothing abnormal in the chest; the laryngoscope was employed, and it was found that the opening of the glottis was occupied by a horse-leech, which was attached to the right arytenoid cartilage by its oval disc. Most of the body was hidden beneath the vocal cords. An unsuccessful attempt was made to extract it on the day of its discovery, but on the next day the leech was removed by a pair of forceps with small curved teeth. This is the third case in which a leech has been discovered in the larynx, and extracted by the aid of the laryngoscope.

RETROVERSION.

Dr. Aveling records in the *Obstetrical Journal* the following anecdote: The postural treatment of retroversion consists in lying or reclining upon the sides, or, still better, upon the face. Prostration also is an admirable attitude. A remarkable anecdote in support of this is told of a lady suffering from retroversion, who made her complaint the subject of prayer, and was surprised to find it answered only whilst she was upon her knees. All pain ceased during the devotional act—that is, when she unconsciously adopted the proper postural treatment.

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THE DOCTOR.

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THE TWO DEBATES.

GERMS, contagium, septic matter, bacteria, spontaneous generation—such are the words that have been in every one's mouth during the month. Two great debates—at the Obstetrical and Pathological Societies respectively—have been held, in which these words have continually recurred. These subjects have also been considered in two of the three courses of lectures at the College of Physicians. These lectures are referred to in another column, but it would be impossible to report the two lengthy debates. They would fill two numbers of the DOCTOR. We will, however, refer to some of the salient points—first, that on puerperal fever, which also is the subject of Dr. Lee's Goulstonian Lectures, of which we give an abstract.

The debate on puerperal fever at the Obstetrical Society was opened by Mr. Spencer Wells. Mr. Wells classes puerperal fever with pyæmia and septicæmia; for he believes that by precautions similar to those inculcated by Lister in his antiseptic method of treating surgical injuries, lying-in hospitals may be rid of puerperal fever just as general hospitals have been rid of pyæmia. He was ably supported by other speakers, notably by Dr. Leishman, of Glasgow, who took occasion to make public the fact that he had renounced the opinions he once entertained, and had come to the conclusion that puerperal fever was generally of a pyæmic or septicæmic character. Dr. Newman, of Stamford, in reply to a common objection, pointed out that there are certain conditions which favour infection with any poison in the puerperal, just as there are certain conditions which predispose to infectious or malarious diseases in the non-puerperal state—namely, exposure to sewer gas in badly-drained houses, and depressing emotions. He named another also which is peculiar to the lying-in woman—the activity of the vital processes in the pregnant and puerperal state; and this point was subsequently worked out by Dr. Richardson, who showed that in several respects a puerperal woman is physiologically in a peculiar condition.

Dr. Braxton Hicks pointed out that 89 or 90 per cent. of cases of puerperal fever could be traced to contagion from specific fevers or to decomposing materials in the uterus, thus leaving only 10 or 11 per cent. in which the cause was difficult to trace. Very important changes take place in the blood in consequence of exposure to contagion, as in malignant small-pox, scarlet fever, &c., as well as in consequence of the introduction of septic or decomposing animal matter into a wound, or into a scratch received while performing an operation or a post-mortem examination. Mr. Hutchinson holds that the poison is not introduced from without, as generally believed, but absorbed from the patient's own tissues, as in septicæmia. Whether bacteria contribute in any way to the production of those fatal symptoms which frequently follow exposure to contagion or septic poison in the puerperal state, this debate could not decide.

The other debate to which we have referred—still not concluded—was opened at the Pathological Society by Dr. C. Bastian, who again brought forward his well-known experiments respecting bacteria. The debate was professedly on the germ theory, but it cannot be concealed that some of the speakers wandered into allied topics. Dr. Bastian argued that bacteria were pathological products produced within the body—that there is a bacteria degeneration analogous to fatty degeneration. The fact that the intensity of contagion diminishes as bacteria increase was held by Dr. Bastian to complete the discomfiture of the germ theory, but he evidently supposed that the holders of the theory looked upon bacteria as germs, and this is not the case with all.

Dr. Burdon Sanderson said that bacteria identical with those found in diseased tissues might be introduced into the body without injury, and, in destructive inflammation bacteria are found only in the outer zone of the disease, where it was spread, and not in the central parts. In relapsing fever spirallæ were only found during the febrile paroxysms, and not subsequently. In erysipelas and sheep-pock bacteria are not found in the vesicles, but in the skin lymphatics.

Dr. Maclagan, of Dundee, made a powerful speech in favour of the germ theory, which he declared to be quite distinct from the theory of the evolution of life. He said no one had said that the bacteria *cause* the phenomena of disease. Some relation to disease they have, but whether causal or not remains undecided, and he freely admitted that if anyone had held this to be causal he must abandon the idea, since Dr. Bastian had shown bacteria to be pathological products.

Dr. Dougall, of Glasgow, referred to thousands of experiments he had made to determine the powers of various bodies to prevent the development of bacteria in animal solutions. He found these organisms can only live in a neutral, faintly acid or faintly alkaline environment, so that the addition of either acid or alkali prevents their appearance. Moreover, bacteria may exist without putrefaction, and *vice versâ*. He thinks the physico-chemical theory quite capable of accounting for all the facts, and more rational than the germ theory.

Dr. Crisp contributed some facts from comparative pathology, and held that we have as yet no proof that the germ theory of disease is founded on facts.

Mr. Hutchinson thought that it is unwise to speak of the contagia of certain inflammations in the same way as of specific fevers. He held that the products of inflammations might be the means of contagion through continuity of the patient's tissues, or through the vascular channels, or through transplantation to distant parts, or to another individual; and he instanced gonorrhœa and gonorrhœal ophthalmia as illustrations of his view.

The surgical aspect of the subject was further referred to by Mr. Knowsley Thornton, and certainly it does seem that this should be distinctly separated from that of the specific fevers.

Although no definite result seems likely to be the outcome of these two debates, they cannot be without value, and readers who have time would do well to peruse them both as well as the two courses of lectures to which we have alluded, and of which we elsewhere give an account. As the discussions are not yet closed, we may express a hope that future speakers may shed further light on the several questions involved. This, however, will scarcely be the case unless they produce new facts. Even Dr. Bastian does not seem to realise that in some respects it is not the inferences he draws from his experiments to which objection is made by his opponents, but they allege the insufficiency of his experiments to justify his inferences.

CHRONICLE.

ON THE CENTRE OF RESPIRATION.

Gierke instituted new experiments for the more precise determination of the respiratory centre. These are related in *Pflüger's Archiv.*, from which the following abstract has been made by the *New York Medical Journal*. After exposing the medulla oblongata, in rabbits, he commenced his investigations by making horizontal sections through its whole breadth, and observing the effect of each section. He thus verified the statements of others, that injuries in the region of the calamus scriptorius suspend respiration. Then, in order to experiment on a more limited surface, he destroyed the hyperglossal roots at the posterior apex of the calamus, and the alæ cinereæ, with a bundle of nervous elements which he considered connected with the pneumogastric roots, without attaining any constant positive results. It was otherwise, however, when the furrow between the alæ cinereæ and the nervous substance within and above it was pierced, for the ribs and diaphragm on the corresponding side were rendered inactive. Thus the author succeeded in ascertaining to be the "respiratory centre" a longitudinal bundle of fine nervous fibres on each side, which had been already previously described, and to which was attributed the origin of the pneumogastric and glosso-pharyngeus roots. This longitudinal bundle is the continuation of fasciculi which branch off transversely from the pneumogastric and hypoglossal roots, and then take a longitudinal course downward to become resolved in the reticular nervous tissue between the anterior and posterior cornua. The calibre of this longitudinal bundle does not become diminished, partly on account of the variable amount of connective-tissue element, partly from the numerous connections of this "respiratory centre" by fibres with groups of cells, which are looked upon as the roots of the trifacial, pneumogastric, and spinal accessory nerves. The author has also observed fibres by which both longitudinal bundles are connected. Experiments in which the author injured the above-described portions of the medulla oblongata, in several rabbits, confirmed their function as respiratory centres; after operations in which the medulla oblongata was cut without injury to the respiratory centres, the rabbits continued to live, sometimes for several hours. According to the traditional view of physiologists, the author sought a *group of cells*, but failed to find them. Only the sections of both pneumogastric roots resulted fatally; but it is to be conjectured that in this case the longitudinal bundles were also wounded. The author does not consider it essential that we should assume the presence of a group of cells as the "respiratory centre;" for all phenomena of respiration might be explained as reflex actions through the medium of sensitive nerves (trifacial, pneumogastric), which receive their motor significance in the motor cells of the phrenic and intercostal nerves. The respiratory centre is the way by which the sensible irritation is led to the centres of the motor nerves of respiration.

TREATMENT OF DIPHTHERIA.

Dr. H. V. Sweringen publishes in the *Philadelphia Medical Times* an account of a new method of treating diphtheria which he has recently adopted.

Dr. S. believes that prompt cinchonism, followed by an alternative tonic, is, if not absolutely a specific, the most proper and successful treatment of diphtheria. It may be urged that there is nothing new in this, but Dr. S. urges that this drug should not be given at random, but administered until cinchonism is produced in a marked degree. He contends that this is the first grand object to be accomplished in the treatment of diphtheria. Dr. S. has full confidence in the antiseptic properties of quinine if properly administered, and believes that when the condition of cinchonism is fully established, the septic poison in the circulation is then neutralised, and founded this belief on the fact that in every case he has thus treated, just so soon as that condition was established, the exudation became detached without any local interference whatever; none during the whole course of treatment. Those cases in which it was most difficult to establish the condition of cinchonism were those which were the most severe and malignant.

Dr. Sweringen has little or no faith in local treatment, except in cases where it is absolutely necessary to remove excessive mechanical obstruction of the air-passages, or to correct the fœtor by disinfectants.

The line of treatment pursued in each case was as follows:—

℞ Quin. sulph., gr. xxxij.;
Acid. tannic., gr. x.;
Syr. simp., f℥i.;
Tr. ol. menth. pip., gtt. iij.—M.

Ft. mist.

Sig.—A teaspoonful every three hours until cinchonism is induced.

After which he administers the following:

℞ Potassii iodidi, gr. xxxij.;
Potassii bromidi, ʒij.;
Syr. simp.,
Tr. cinch. co., aa f℥i.—M.

Ft. sol.

Sig.—A teaspoonful every three or four hours.

The above may be given alternately with the following:—

℞ Tr. ferri chlor., f℥ij.;
Syr. simp., f℥vi.—M.

Ft. mist.

PHOSPHATE OF LIME IN RICKETS, CONSUMPTION, AND OTHER WASTING DISEASES.

DR. DUSART (*Memorabilien*) says that the knowledge which has hitherto been possessed as to the part played by phosphate of lime in the change of tissues has been greatly altered by some experiments he made in 1869-70, and also by another work under the title of "Losses of Mineral Constituents in Acute and Chronic Diseases."

It is seen from this work that phosphate of lime, besides the considerable part which it plays in the building up of the skeleton, has other, and not less important functions to fulfil. It happens under its influence that the albuminous parts of the food, after they have been absorbed by the stomach, and taken up by the tissues, are now also used for the forms which we find again in the different fibres, muscular and nervous, &c.

The presence of the phosphate of lime is so important to the keeping up of the needful tone of the organism that, when it is not supplied in sufficient quantity by the food, the activity of assimilation is disturbed to such a degree that the body soon loses weight and every physical and mental energy is lessened.

On the other hand, if we succeed in getting enough of the phosphate of lime into the system, the appetite again returns, and the activity of muscles and brain is renewed, whilst the body evidently gains in size.

These are, according to our author, the properties which must be admitted to be possessed by phosphate of lime.

If the phosphate of lime has up to this date found no greater fame as a therapeutic remedy, the form it is used in is the cause, because in this form it could not be absorbed.

After the author had convinced himself that the phosphate of lime entering the stomach is dissolved by the lactic acid of the gastric juice, he imitates nature in order to overcome this difficulty, and made a mixture, to which he gave the name of lacto-phosphate of lime, which contains the salt in a digested form, whereby this can be taken up by the veins of the stomach.

Relative to the uses to which the properties of the new remedy are to be put, and the indication for its use, these are easily understood when we keep in view that it is to be used as a remedy in all those cases where nutrition is insufficient.

Children that find neither in their mothers' milk nor in that of animals the sufficient amount of phosphate of lime for the development of the different parts of their body, fall away, whilst the digestion suffers, and diarrhœa and vomiting set in; the belly becomes enlarged, and the extremities show the changes which are characteristic of rickets; the arrival of teeth generally also remains tardy.

In other cases we see that the soft parts and lymphatic glands of young infants become filled with the elements of nutrition, which, because of the want of lime salts, do not possess the power to form hard parts. Or we meet with infants whose bones have been developed at the expense of other parts of the body too quickly, who are tormented on the slightest shock from without by pain and swelling in the joints, and in whom white swelling is easily excited.

Pregnant women and nurses, who must draw the development of new beings at the expense of their own bodies, are often very weak, and are tormented by colic, loss of appetite, and disturbed digestion, which we must put down entirely as symptoms of exhaustion. It is necessary to remark what an influence poor diet has on the appearance of diseases of the lungs, and also of all those diseases which we are accustomed to call cachexiæ. On the other hand, every one understands that, when the organism is exhausted by fever or acute disease, we require strengthening remedies in order to cover the deficit.

Lastly, the author speaks of hot climates, remarking that, when the muscles and the other parts of the organism are weakened under the influence of the high temperature and of damp, and when the excessive losses from the skin and kidneys and the gastric juice are diminished, in such cases the liver, the activity of which can no longer be excited by the presence of nourishing food, becomes exhausted, and inflammation of that organ early appears.

It is therefore necessary, by the giving of the lactates of the alkalies, to assist the function of the gastric juice, or, according to Petrequin, to aid the want of gastric juice by pepsine and some acid which is identical with the fluid poured out by the glands of the stomach. According to the author, the lacto-phosphate of lime quite fulfils these indications.

It is already to be seen by these general remarks how common and multiform the cases are in which the use of the strengthening and regenerating lacto-phosphate of lime is indicated; in fact, there are hardly any diseased conditions in which faulty nutrition is not either the cause or the consequence of such states. The experiments made by the author, which are authenticated by noted authorities, also point out the truth of the suppositions he puts forward. They also explain how this new remedy has so quickly gained the good will of physicians, so that at present it has taken a high place among tonic and recuperative remedies.

OPHTHALMOSCOPY IN CEREBRAL DISEASES.

VI

M. BOUCHUT has recently given in the *Hôpital des Enfants Malades* the results of his labours with the ophthalmoscope as a means of investigating the condition of the brain. His lectures, of which an abstract appears in *La France Médicale*, opened with an exposition of the anatomical and physiological relations of the eye with the brain and spinal cord, in order to show the influence of cerebro-spinal lesions upon the optic nerve, the retina, and the choroid. He lays down four laws as to the formation of intra-ocular lesions caused by diseases of the brain, the cord, and the meninges:

1. Whenever the circulation is impeded in the cranium or in the sinuses or meningeal by compression of the ventricles distended by serum or other cause, an arrest of the venous circulation takes place, which produces in the eye swelling, hyperæmia, and œdema of the papilla, varicosities of the veins, and sometimes hæmorrhages.

2. When a tumour with encephalitis, or when partial encephalitis exists, it causes an inflammation which brings about sclerosis of the optic nerve and exudations which imprison the papilla, and, at length, cause its atrophy.

3. If the cord is affected either by anterior or posterior sclerosis it acts upon the eye through the great sympathetic, giving rise to hyperæmia of the papilla ending in atrophy. This occurs in locomotor ataxy.

4. In every diathesis and in cases of poisoning when

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the whole body suffers the eye suffers with it, and we meet with certain forms of neuritis or choroiditis.

M. Bouchut exhibited more than 100 figures drawn during the twelve years over which his researches have extended, and then demonstrated the various ocular lesions produced by diseases of the nervous centres. He showed cases of spinal neuritis, and those which result from locomotor ataxy; and then of neuritis and neuro-retinitis, produced by meningitis (tubercular, typhoid, or rheumatic); by cerebral hæmorrhage and softening; by hydrocephalus and thrombosis of the sinuses; by chronic encephalitis, and by the same condition resulting from heart disease; by tumours of the brain; by tuberculosis; by syphilis; by albuminuria; by leucæmia; and, finally, neuritis resulting from paralysis of the sixth pair consequent upon certain forms of epilepsy, hallucinations, concussion of the brain, &c.

The Doctor

THE ACTION OF PICROTOXINE.

Dr. Crichton Browne has published in the *British Medical Journal* a series of articles, in which he details a number of experiments made to determine the actions of picrotoxine and the antagonism between that substance and chloral hydrate.

His observations on the actions of picrotoxine may be summed up in the following conclusions:

1. It is an energetic poison, and acts chiefly upon the encephalic centres.
2. It causes first, sudden excessive and paroxysmal discharges of certain gradually widening areas of the cerebrum; secondly, continuous but remittent discharges of the corpora quadrigemina, cerebellum, pons Varolii and medulla oblongata; and, thirdly, exhaustion of all the centres discharged, coma, and death.
3. It diminishes the activity of the reflex centres, and general sensibility, by paralysing the posterior columns of the cord and the peripheral sensory nerve.
4. It firsts quickens, and finally retards, the movements of respiration, and the cardiac contractions.
5. It produces a decided lowering of the temperature of the body.
6. It increases the secretion of the salivary glands, and the peristaltic movements of the intestines.
7. It causes great venous congestion of the encephalon, and occasionally extravasations of blood upon its surface.

COPPER IN EPILEPSY.

M. Charcot has treated a number of cases of epilepsy with the ammoniacal sulphate of copper. One of his patients took as much as 43 grammes (= about 640 English grains) of the salt in a period of four months. He died of tuberculosis three months later. At the autopsy no alteration was discovered in the stomach or intestines, but on analysis by M. Yvon, 295 milligrammes of metallic copper were extracted (= 1·166 grammes of the sulphate). It is to be remembered that he had left off the copper three months before he died, and that during that time a portion of the copper was eliminated. The quantity extracted is more than double that met with in the liver of two women who had been poisoned by copper.

THE STATE OF THE BLOOD IN JAUNDICE.

MM. Feltz and **Ritter** have lately addressed a communication to the Academy of Sciences of Paris, in which they detail a series of experiments undertaken to determine the effect produced by ligature of the bile-duct, and to determine the condition of the blood in malignant jaundice. From their experiments and from their clinical observations it would appear that absorption of the biliary salt plays the principal part in cases of jaundice. Further, all those conditions termed *bilious*, whether they are the cause or the effect of the lesions of the splanchnic viscera, are characterised by the presence of these salts in the blood.

GOLD IN HYSTERIA.

Dr. Martini extols in *The Scalpel* the effects of the double chloride of gold and sodium in cases of hysteria arising from functional disorder of the uterus and its appendages. According to him congestion and engorgement of the body or of the cervix disappear under the use of this remedy. Moreover, in five cases of congenital atrophy of the cervix the auro-sodic salt produced excellent effects. He believes that it has an elective action upon the nutrition of the uterus, and may be therefore used with advantage in every case dependent upon atony of this organ.

On account of its taste it should not be given either in powder or in solution, but only in pills; and we would add that the powerful effects of this poison and the little we know of its therapeutic action should lead us to employ it with extreme caution.

POST-PARTUM HÆMORRHAGE.

Dr. Demagny relates in the *Bulletin de Thérapeutique* a case of post-partum hæmorrhage which he succeeded in arresting by compression of the abdominal aorta. The pressure was kept up for an hour and a half. Convalescence was very slow, the patient being unable to attend to her household duties for a period of six months.

Dr. Windelband recommends in such cases the injection of warm water into the cavity of the uterus; and he extends this method to other cases of hæmorrhage, including those arising from fibromata or carcinoma. He has used the water at a temperature of from 95° to 100° F. in more than twenty cases without any ill result.

In reference to this we would remark that the terms warm and cold are only relative. The temperature of the internal organs being just upon 100° F., to apply water at 95° F. is certainly to apply cold.

A DANGER OF RAW MEAT.

Prof. Francesco Mascari mentions (*Gazette Médicale* a case in which tapeworm occurred in a child eighteen months old, subsequent to the medicinal use of raw meat.

Dr. R. Levi thinks that the raw flesh of fowl would not be so likely to lead to the production of these worms.

SEA-WATER AS A REMEDY.

M. Lisle recommends the internal use of sea-water in all cases which present unequivocal signs of impoverishment of the blood. He advises (*Bull. Gén. de Thérapeutique*)—1. The patient's bread to be made with sea-water; 2. A syrup composed of equal parts of sea-water and sugar—dose, two teaspoonfuls per day, gradually increased up to eight tablespoonfuls; and, 3. Instead of this, an elixir made as follows:

Sea-water, 200 grammes;
Rum, 20 centilitres;
Sugar, sufficient to make 500 grammes;

Dose—3 spoonfuls per day to begin.

Either the syrup or the elixir diluted with two or three times their volume of water may be taken at the commencement of a meal or within a quarter of an hour afterwards.

ACTION OF CHLORAL HYDRATE.

MM. Feltz and **Ritter** (*Journ. de Thér. and Boston Med. and S. J.*), in experimenting upon dogs, found that upon killing them by repeated injections of sufficient chloral to keep them in a continuous state of anæsthesia, the urine contained dissolved hæmoglobin. After death, ecchymotic spots were found upon the intestinal mucous membrane, and congestion of the kidneys. The blood was profoundly altered, the globules deformed, without elasticity, the plasma was tinged red, and the globules had notably lost their capacity to absorb oxygen. The *expired air yielded chloral and not chloroform.*

M. Tanret finds that if to a mixed solution of hydrate of chloral and permanganate of potassa an alkaline solution, such as caustic potassa, or even borax, be added, oxide of carbon is disengaged.

He thinks it probable that this decomposition takes place in the blood, and that the fall of temperature observed during the action of chloral is like that observed by Claude Bernard in poisoning by carbonic oxide, which combines with the blood-globules.

THE CURE OF BENT KNEE.

MR. MORGAN, of Dublin, has communicated to the *Medical Press and Circular* some cases of bent knee, in which, after years of incapacity, he has restored the use of the joints in two or three weeks by extension. The *Press* of the 7th ult. gave a supplement consisting of six beautiful engravings showing the appearances of some of the patients before and after Mr. Morgan's manipulation. He is certainly to be congratulated on his success, which seems to show that many patients now going on crutches might have the use of their joints restored without osteotomy. Mr. Morgan says his treatment is applicable to all joints, even to the hip, when assisted by myotomy.

ACTION OF IODINE.

FREE iodine, according to Kammerer (*Virchow's Archiv.*), acts by destroying the parts with which it is brought into contact, and he further considers that the general effect of iodide of potassium is due to the decomposition of the salt in the blood, iodine being set free.

Prof. Binz, of Bonn, believes that iodide of potassium undergoes the following changes when taken internally. In a healthy stomach, a part is changed by the hydrochloric acid into hydriodic acid ($KI + HCl = KCl + HI$); another portion is acted on by the chloride of sodium, so that iodide of sodium is formed; and, if the dose be large enough, a part remains unaltered. All the three combinations quickly pass into the circulation. The hydriodic acid here meets with soda, and forms iodide of sodium; but the alkaline combinations of iodine are again acted on in the tissue by carbonic and other acids, and iodine is set free. This free iodide has the property of combining with certain albuminous bodies; and in this, Binz believes, lies the explanation of the therapeutic action of the preparations of iodine.

Kämmerer cannot agree with Binz, as iodine acts upon a watery solution of an alkaline carbonate with a formation of an iodide and an iodate of the alkali.

Beside the free iodine, Kämmerer supposes that another body is formed, upon which iodine does not act, probably superoxide of potassium, which easily oxidises organic bodies, by which it is reduced to potash, thus increasing the metamorphosis of tissue. The organic bodies to be oxidised may be miasmatic substances and ferments, or, later, fibrin and albuminous bodies.

Buchheim, after stating (*Archiv. f. Exper. Path. und Pharm.*) that iodide of potassium is an easily dialysable salt, and as such rapidly eliminated from various mucous membranes, finds in the ozone which is always developed wherever watery evaporation is rapidly going on, and therefore on the skin and mucous membranes, an agent capable of setting free the iodine from its combination, thus giving rise to coryza, &c. The acne-like eruption is due to the iodide eliminated with chloride of sodium in the perspiration.

Buchheim cannot admit the increased destruction of albuminoid material spoken of by Kämmerer on either chemical or clinical grounds. A destruction of miasmatic substances and ferments is not among the observed effects of iodide of potassium. Neither the temperature nor the excretion of urea is increased by its use, as they should be according to Kämmerer's theory. The emaciation and dyspeptic symptoms observed from the use of tincture of iodine and of Lugol's solution are not necessary consequences even of the long-continued use of iodide of potassium.

Buchheim suggests that the free iodine acting upon the walls of the smaller blood-vessels and capillaries may so irritate them as to cause their contraction, and thus a diminished blood supply to certain very vascular organs, as the thyroid gland and the spleen, which show especial susceptibility to the action of this drug. With small doses this action is felt only upon organs having a specially favourable organisation for it, as in those just mentioned, while if the dose is larger the action is a more general one.

PROFESSOR VOLKMANN ON ANTISEPTIC OSTEOTOMY.

IN the *Edinburgh Medical Journal* for March an important paper of Professor Volkmann on Antiseptic Osteotomy gives us some interesting information as to Lister's method as practised by the learned Professor of Halle.

Two cases are reported in which osteotomy was performed on account of anchylosis of the knee-joint.

Both patients were girls almost arrived at puberty, who had been obliged to walk with crutches for years, the knee being bent at a right angle and in a condition unfavourable for forcible extension. In one of the cases the femur only was divided just above the joint; but in the other the tibia was cut through as well, immediately below the articulation, and the angular contraction was corrected at the expense of the divided bones. Both patients have made a good recovery, and are walking about well with high-soled boots, which were rendered necessary because in both cases the affected limb had from long disuse been somewhat less developed than that of the opposite side.

The justification of operations like these undoubtedly depends entirely on the possibility of guaranteeing a successful termination. Professor Volkmann believes that we are not assuming too much in saying that we have by degrees attained sufficient practice and experience in the antiseptic treatment of wounds to be really able to promise such a result with certainty.

Since the introduction of the antiseptic method into Volkmann's clinique, at the end of November, 1872, no single patient suffering from a compound fracture in which conservative treatment was attempted, has died. Amongst this number are included even those cases in which conservative treatment was only resorted to because the patients would not give their consent to amputation, and also those in which he at first underestimated the severity of the injury, and afterwards intermediate or secondary amputation had to be undertaken on account of hæmorrhage or gangrene. The number of compound fractures successfully treated without a single fatal result in his hospital, which is old and always overcrowded, and offers the most unhealthy hygienic conditions, amounts to 31. Amongst these were as many as 19 compound fractures of the leg, in several instances much comminuted and often complicated with most severe bruising and laceration of soft parts. There were also two compound comminuted fractures of the patella, both of which recovered with movable joints. No case of pyæmia has occurred since July, 1873, although during this period alone about 60 major amputations have taken place.

Osteotomy has only been practised extensively during the last year, and whereas it used formerly to be restricted to a few isolated cases in the leg, its employment is now extended to the thigh. In the *Centralblatt für Chirurgie*, No. 1, 1874, are published two cases of extreme contraction of the hip-joint, in which Volkmann removed a wedge-shaped piece of bone from the femur below the trochanter.

During the year 1874, he performed osteotomy 13 times (the division of two bones in the same patient being counted as two operations), and of these 10 recovered without any suppuration at all, and the others with only the most trifling possible amount. In all the local reaction was absolutely *nil*, and in no case did the slightest redness or swelling of the soft parts take place, to say nothing of any phlegmonous inflammation. All these operations were performed with a chisel; and if, as in most cases, a simple division of the bone, and not the removal of a wedge-shaped piece, was intended, the instrument employed was extremely narrow, but at the same time rather stoutly made, with a cutting edge only two or three lines broad. To prevent the chisel from becoming jammed and sticking fast in the deeper parts of the incision into the bone, instruments of varying thickness were used. The superficial part was divided with the stoutest, the deeper with a thinner, and the deepest with the thinnest instrument of all, so that the cleft was slightly wedge-shaped. The posterior layer of compact tissue was never completely cut through, but was broken, so that no risk might be run of injuring the soft parts behind.

DIAGNOSIS OF DISEASE OF THE LIVER.

Prof. **Behier** lately lectured at the Hôtel-Dieu on the difficulties of diagnosis in certain diseases, and an abstract of his observations, by M. Dalbanne, appears in *Le Courier Médical*. He related cases in which cirrhosis of the liver had been believed to exist up to the time of death, but in which the autopsy revealed abdominal cancer or some other lesion. He says that whenever ascites is the first symptom, and is accompanied by emaciation, an earthy tint, diminution of the area of hepatic dulness, with absence of vomiting, one naturally supposes the symptoms are due to cirrhosis of the liver. On the other hand, if the ascites is preceded by obstinate vomitings which began suddenly, cancer of the stomach may be suspected. As for dilation of the abdominal subcutaneous veins, this appearance is common to both diseases. He concludes that the diagnosis of cirrhosis of the liver is more difficult than is generally supposed, and in three of his cases of cancer the characteristic aspect described by authors was replaced by the earthy tint of cirrhosis of the liver.

A NEW ANTIDOTE FOR PHOSPHORUS.

MM. **Thiernesse** and **Casse** have brought before the Royal Academy of Medicine of Brussels an important series of experiments tending to show that oxygen introduced into the veins will counteract the poisonous effects of phosphorus. M. Casse contrived a simple apparatus for injecting the gas into the veins in definite quantities. The minimum fatal dose of phosphorus is generally reckoned at one centigramme for each kilogramme of the animal's weight, but in some of their experiments they administered double this dose, and yet saved the animals. In one case the poisoned animal, having been treated by the gas, appeared to be nearly cured, but on the third day the symptoms of poisoning reappeared, and the animal appeared to be dying. Thereupon a second injection of gas was administered, with immediate relief, and the animal was completely cured. In the memoir submitted to the Academy, M. Casse promises an improved apparatus by which he believes that the gas may be introduced into the veins of man without danger. In that case, it will seem possible that this treatment may be employed in a great number of cases besides those of poisoning by phosphorus.

THE ANATOMY OF THE EAR.

Professor **Politzer** has communicated to the Vienna Academy the result of his investigations into the anatomy of the ear. He (*Allgemeine Wiener Medizinische Zeitung*) finds that in newly-born children the cavity of the pyramid containing the stapedius muscle is separated only at the upper part by osseous tissue from the canal through which the facial nerve passes, while the lower part of the cavity communicates freely with the same canal, and thus allows, at this spot, the muscle and nerve coverings to come into actual contact with each other. In the adult, the amount of direct communication between the cavity and canal is very various, ranging from a small opening sufficient for the passage of the nerve to the stapedius, to a large irregular opening. The styloid process, he avers, arises from a cartilaginous body, which not only in the fœtus, but also in the newly born, is to be found as an isolated cartilaginous formation; and the upper end of the process does not terminate at the external visible base, but passes through a thin osseous lamella along the posterior wall of the tympanic cavity, reaching as far as the eminentia stapedii. In the adult, the process is sometimes solid, sometimes hollow, but generally there is a cellular structure with or without a central canal.

QUININE.

Professor **Bamberger** uses quinine as an antipyretic. He has found single doses of fifteen grains to reduce very markedly the temperature in pneumonia; and the diminution continues for forty-eight hours; a return of pyrexia is checked by a second smaller dose of quinine. In cases where it is not contraindicated by age or feebleness, Bamberger now combines with quinine the use of the wet sheet, and with excellent result. Except nourishment and palliation of any troublesome symptom, no other treatment is pursued.

ACTION OF DIGITALIS ON THE EVOLUTION OF TYPHOID FEVER.

Dr. **Bernheim**, Professor Agrégé at the Faculty of Medicine at Nancy, publishes ("Memoirs of the Société de Médecine de Nancy, 1873) his conclusions on this subject. They are as follows:—1. The thermometric evolution of typhoid fever is comprehended in the following formula, initial period from three to five days. Period of actual disease from one to two weeks, period of decline from six to eight days. In serious cases, a second irregular period commences about the middle of the third week. 2. Digitalis, when given in typhoid fever, lowers the temperature; either complete defervescence or remission. 3. The first effect of digitalis on the temperature shows itself two days after administration, the lowest temperature is obtained on the following day, sometimes only on the fourth day. 4. The lowering is generally progressive; sometimes it terminates by a more rapid fall. In some cases there is a very rapid fall in the interval between two thermometric observations, from the evening to the morning, or from the morning to the evening. 5. During the action of the digitalis, the temperature may rise again in the evening, often it is equal, or inferior to that of the morning. Defervescence, or the greatest remission, may occur in the evening. 6. This defervescence, or greatest remission, lasts from a few hours to three days, the temperature then rises. In about two-thirds of the cases, it no longer rises to the same height as before the administration of the digitalis. 7. The action of digitalis on the thermometric evolution of typhoid fever may be thus expressed, the temperature is lowered. Taking into account the descent, the minimum, and the reascent, it may be said that the duration of the influence on the temperature varies from three to twelve days, the average being seven days. In two-thirds of the cases, the thermometer never reaches the original point. 8. The pulse generally falls gradually with the temperature; the temperature rarely falls before the pulse, or the pulse before the temperature. 9. It is very rarely that either the pulse or the temperature is alone influenced. 10. The pulse and the temperature fall together, but not in a parallel manner. Sometimes the pulse is lowered at night whilst the temperature still undergoes the evening exacerbation. 11. After the reascent of the temperature, the pulse generally remains low; it may even slacken still more, and attain its minimum several days later, even remaining slow during three weeks. 12. The lowering of the pulse varies from thirty to sixty pulsations. In the greater number of cases it falls below the normal. 13. The sphygmographic tracings undergo modifications through digitalis. Dicrotism between two pulsations appears on the line of descent. It rises again on that line. The pulse first becomes irregular, often reduplicate; then the line of descent becomes longer and more oblique, and tends to show a convexity above. These characteristics are explained by increase of tension and arterial tonicity. 14. Digitalis has never produced any unpleasant action on the nervous system nor on the digestive canal. The delirium often ceases or diminishes with the decrease of heat, and respiration is calmer. The intestinal hæmorrhage pointed out by Ferber as being probably produced by digitalis, does not appear in any case to have been due to this medicament. 15. The fever may evolve itself with a slackened pulse. The acceleration of the heart's action is not necessary to fever, it is a secondary phenomenon which appears due to the augmentation of the heat itself. In the tracings of pulse and temperature taken about the beginning of an attack of fever, the thermometric tracing rises before that of the pulse. 16. The slackening of the pulse obtained by digitalis is not the cause of the lowering of the temperature. 17. The physiological mechanism of the antipyretic action of digitalis is not explained. This action is at least partially independent of the heart and of the modifications of the arterial tension. Digitalis does not seem to act directly on organic combustion. A nerve-poison and not a blood-poison, it seems to act on the nervous system, the regulator of the animal temperature, an apparatus which, on one side, directs the waste of caloric notably by the vaso-motor nerves, and on the other, regulated the production of caloric by special ways, yet unknown, but admitted by most physiologists.

SIR H. THOMPSON'S OPERATIONS FOR STONE IN THE ADULT.

SIR HENRY THOMPSON compares in the *Lancet* his last 100 cases of operation in *the adult* with Martineau's famous series of 84 cases with only 2 deaths. He has not included any patient below 22 years of age, at which there happens to be one. There are only four patients, including that one, below 50 years of age, while in Martineau's series of 84 there are not less than fifty-four below that age. Of the 100 cases, sixty-five are above 60 years of age (only twelve are above that age in Martineau's list), and the mean age of the entire 100 cases is not less than 63½ years (the mean of Martineau's entire adult series is under 47 years).

Ninety-six were adult males, four were adult females.

Of the 96 males, 87 were operated on by lithotrity and 9 by lateral lithotomy.

The mean age of the 87 operated on by lithotrity is 63½ years, the oldest being 83, the youngest 22, but only 4 were below 50 years.

The mean age of the 9 operated on by lithotomy was 63½ years also, their respective ages being 36, 59, 59, 61, 63, 70, 75, and 79.

Among the 87 operated on by lithotrity were 4 deaths, the ages were 61, 65, 66, and 81.

Among the 9 operated on by lithotomy were 2 deaths—viz., at 61 and 63.

Thus it will be seen that there was a total of 6 deaths in 96 patients, with a mean age of 63½, by the two operations.

Alluding to what has been termed a run of successful cases in practice, Sir H. Thompson observes that in this 100 there was one more remarkable than he has ever before heard of. He had a succession of 51 elderly adult cases without a single death. They occurred between July, 1873, and June, 1874. These 51 cases (7 more than Martineau's entire adult series of all ages) had a mean age of 64 years.

PULSATILE FLUSHING OR REDDENING OF THE PALMS OF THE HANDS AND VENOUS PULSATION.

DR. W. H. BROADBENT records two cases in the *Lancet* in which pulsatile flushing of the cutaneous capillaries and direct pulsation in the veins on the back of the hand was seen. This is most readily seen, according to his experience, in the hands when they are warm from having been under the bed-clothes. In the cases in which it is observed certain parts of the palm will be found to present a bright pink blush, the prominences, namely, along the series of metacarpo-phalangeal joints, the thenar and hypothenar eminences, but notably the ball of the first finger. Fixing the attention on any of these points, but especially on the part last named, the redness is seen suddenly to extend and deepen with each pulsation of the arteries, fading rather less quickly in the interval. In a well-marked case these rapid alternations of red and white have almost a dazzling effect when attentively watched for a time. Of course this distension of the capillaries with blood at each pulsation can only take place when there is an extreme degree of arterial relaxation and dilatation, and other signs of this condition will be present. The pulse will be large, soft, and short, or collapsing, and perhaps visible; the pulsation of the palmar arch may be seen, the digital arteries will be felt to beat violently, and the pulp of the terminal phalanges seems to swell under the fingers. Naturally also, when the blood is allowed to rush in this way almost unobstructedly through the arteries and capillaries, it will not have lost its pulsatile motion when it reaches the veins; but special measures have to be taken to render this visible. For venous pulsation to be easily seen the veins must be full, but not distended or obstructed. It is generally sufficient to let the hand drop at the wrist, when the dependent position of the fingers and the slight tension of the skin over the wrist will cause the veins of the back of the hand to fill; a pulsatile wave will then be seen to pass gently along these vessels from below upwards just after each pulse in the radial artery.

Both Dr. B.'s cases were after acute rheumatism, and the symptoms was evidently due to a combination of favouring conditions: aortic regurgitation in which the movement of the blood is less sustained and more intermittent, together with relaxation of the peripheral vessels generally by pyrexia, and of the vessels of the part by warmth, which permitted the blood to shoot into the capillaries. It should be noted, however, that the pyrexial stage was over when the reddening was seen; the arterio-capillary relaxation was therefore not due to the temperature of the blood at the moment. It may be considered as a residual phenomenon of the antecedent pyrexia, but it must be remembered that the same degree of pyrexia, as estimated by temperature, is attended by very different conditions of the arterioles in different diseases; they are contracted, for instance, in scarlatina, relaxed in enteric fever, but especially they are extremely relaxed in acute rheumatism, more so than in any other disease, while in any attack of acute gout which has come under his observation there has always been a degree of arterial tension. In chronic gout arterial tension is a constant characteristic. Dr. B. attaches considerable importance to this difference (as regards the relations between the blood and tissues or vessels) between gout and rheumatism; in the one the passage of the blood through the arterioles and capillaries being resisted, while in the other it shoots or slips through with undue facility. He also says that the only two instances in which he has seen marked venous pulsation have been cases of chronic alcoholism in which for a long time very little food had been taken. If alcoholism pure and simple gives rise to persistent arterio-capillary *relaxation*, and if, as he is disposed to believe, arterio-capillary *tension* is a link in the chain of causation of contracted granular kidney, then alcoholism can only contribute indirectly to the production of this disease, probably by inducing retention of nitrogenised waste.

NON-NITROGENOUS DIET.

LAST year we called attention to the experiments of Prof. Parkes on the effects of an absolutely non-nitrogenous diet.

Dr. Andrew, in the new volume of "St. Bartholomew's Hospital Reports," informs us that he has submitted eight cases of acute rheumatism to this diet, which he believes promises better results in this disease than any other treatment. The pains disappeared on the average in 3·75 days, the longest time being 5, the shortest 2.

It is to be remarked that only young patients whose powers of nutrition are unbroken are likely to bear with benefit this powerful method of treatment, and even in these it cannot be continued very long. Dr. Parkes himself showed that the power of the heart is greatly reduced by this diet within twenty-four hours. It would seem, therefore, that such a plan is only adapted for acute cases. Nevertheless, Dr. Moss, of the Royal Naval Hospital, Esquimalt, Vancouver's Island, has applied it, though without much success, to *chronic* rheumatism, which it appears is very common in that island. The diet adopted was that given by Dr. Parkes, with the addition of tapioca pudding without milk or eggs. It consisted of arrowroot cakes made with butter, and sometimes with sugar or treacle. Dr. Moss gives the details of the weights and quantities. The bowels became regular, the rheumatic pains lessened, and dyspepsia disappeared.

TOPICS OF THE TIME.

RESEARCHES ON BLOOD.

COUNTING THE CORPUSCLES.

Some of our readers may have learned that M. Mellassez has invented an instrument to enable us to count the blood corpuscles. It consists of a very fine capillary glass tube of definite capacity, and so small as to bear microscopic examination with a quarter inch power. He dilutes the blood with artificial serum, counts the corpuscles, and then calculates the number in a given quantity of blood. In healthy people he found the number varied from four to six millions in a cubic millimetre, the average being 4,600,000. In the same subject the number remained tolerably constant; but our readers will probably think that the variation from four to six millions is considerable, and it seems to us that calculations based on such small quantities of blood as must necessarily be employed are beset with uncertainty.

Some practical applications have already been made of the invention. Thus, by its use it has been shown that under the influence of iron the number of the corpuscles rapidly increased in anæmic patients.

Dr. Wilbouchewitch, of Moscow, has also employed the apparatus to determine the effect of mercury and of disease upon the blood. He found in syphilitic subjects a decrease in the number of corpuscles to the extent of 200,000 daily, but as soon as mercury was administered they began to increase at the rate of 80,000 daily in the first week, and for the next two or three weeks at the rate of 120,000. They then began to decrease again, so that in another fortnight the number was no larger than before treatment. On suspending the mercury at this period, an increase again occurred at the rate of about 90,000 daily. As a rule, the number of the white corpuscles changed in an inverse ratio to those of the red.

These experiments appear to us to confirm the opinion of most therapeutists that mercury is very destructive to the red blood corpuscles, and they further suggest that in syphilis its administration should be occasionally suspended. If it should be found practicable to administer mercury as long as it enriches the blood, and to suspend it as soon as it begins to impoverish it, we should be enabled to obtain all the benefits of the drug without any risk of producing injurious effects.

The same method of investigation is evidently applicable to other drugs besides iron and mercury.

CHANGES SEEN WITH THE MICROSCOPE.

In connection with what has preceded we may draw attention to the investigations of M. Laptschinsky, of St. Petersburg, who, in a paper in the *Centralblatt*, reports that, where marked febrile symptoms are present, the microscopic aspect of the blood is essentially different from that of health. The changes consist in the blood-corpuscles not running into regularly formed rouleaux, but accumulating in heaps or clumps of various size and shape. The individual blood-corpuscles frequently appear swollen and cloudy, and their contours less distinct than natural. Small corpuscles, one-third of the normal size, are often met with, some of which exhibit a more intense colour than natural, whilst others are completely pale. In the interspaces of the clumps of red corpuscles, great numbers of white corpuscles may be seen, often coalescing to form groups of from 3 to 8.

In typhus he counted from 60 to 80, and more, in one field of vision; in cholera from 110 to 130. Careful examination of the relative numbers of white and red corpuscles, four days after death, in the above cases, showed that there was 1 white to 60 red corpuscles in the case of typhus, and 1 white to 23 coloured in the case of cholera. In a very anæmic woman, suffering from suppuration of the knee-joint, the proportion of the white rose to 1 to 13 red. The white corpuscles in these cases presented unusually active and extensive amœboid movements. The nuclei of the colourless corpuscles took a part in the amœboid movements, and could be seen altering their position and form in the interior of the white corpuscles. The thorn-apple or horse-chestnut-like form of the red corpuscles he did not find to be unusually frequent. He found, however, granular or detritus-like material in the blood of febrile but not much in the blood of cachectic and anæmic patients. From his enumerations he feels satisfied that in febrile diseases and in Bright's disease the conversion or development of white corpuscles into red is either materially retarded or is entirely arrested.

INFLUENCE OF CONCENTRATION.

The influence of the concentration of the blood and of the fluids of the tissues upon the changes of the colourless blood corpuscles has been studied by Dr. Richard Thoma, of Heidelberg, who examined the influence exerted by the liquids of the body in different states of fluidity upon the colourless blood corpuscles, when circulating in the blood and when wandering in the tissues. He began his researches (*Virchow's Archiv.*, vol. lxii.) by observing the behaviour of the colourless blood corpuscles in the air chamber. His experiments were made first with the blood of frogs, lizards, dogs, and guinea-pigs. He found in blood, more *concentrated* than generally, a comparatively *greater number* of white blood corpuscles in a *stable* state and a lesser number of them as *amœboid* cells, *i.e.*, cells in the state of transformation, whilst in more watery blood there was a relative increase of amœboid cells. The stable cells were globular, light-refracting, granular, and contained sometimes numbers of light-refracting granules. The amœboid cells contained, sometimes, empty bubbles, and had numbers of prolongations. Those which were adherent to the glass cover have more prolongations, contain more bubbles, and enclose three or four nuclei. The live tissues have a similar influence upon the white blood cells as the glass cover of an air chamber. In watery blood more white blood corpuscles adhered to the cover than in more concentrated blood.

As the blood is concentrated, so do the white corpuscles tend to become stable. They then assume the globular form and often become covered with cilia. This is no decaying form, as such cells will assume their former properties and become even amœboid, when the blood plasma becomes again more watery.

The changes produced by concentration of blood in live animals were like those already mentioned.

On injecting water into the median abdominal vein of a frog, œdema followed. After a longer infusion the blood plasma appeared coloured by dissolved hæmatine. The colouring matter passes then into the tissues and the lymph vessels. The less concentrated state of the blood becomes more perceptible by the presence of many amœboid cells. Those which adhere to the walls of the vessels are always in a lively state of transformation and motion. Their prolongations are turned against the blood current. When the blood is again concentrated by exhalation the white cells lose their amœboid motions and become covered by cilia. A similar phenomenon is observed when a solution containing three per cent. of chloride of sodium is injected into the blood.

The author next endeavoured to decide if the wandering cells likewise are influenced by differences in the concentration of the fluids of the tissues. He found that watery blood causes lively movements of the white wandering cells, whereas their amœboid motions become slower and cease at last, when the blood is brought into a state of exhalation, or after the infusion of water containing three per cent. chloride of sodium. The white wandering cells changed then into glossy and motionless globules, often covered with cilia. Similar results followed the wounding of the tongue of a frog and irrigating the wound after the appearance of suppuration. On using a solution containing half a per cent. of chloride of sodium, a numerous emigration of white cells, especially from the smaller veins, was observed, their amœboid transformation and motions were very lively, and they entered at last the lymph vessels; whereas the application of a solution three times stronger stopped all their motions and caused the change of the amœboid cells into glossy globules. With stronger solutions (2½ to 6 per cent.) the vessels became dilated, the blood current slackened, and the volume of the blood plasma decreased in comparison with the number of blood corpuscles. The latter accumulate in the vessels and there soon follows stasis in the capillaries. Sometimes a diapedesis of the blood corpuscles into the tissues, causing small ecchymoses, may be observed. Irrigation, with weak solutions (up to 1 per cent.), caused an œdema of the tongue, which does not appear by the application of stronger solutions.

THE GOULSTONIAN LECTURES.

THE following is an abstract of the Goulstonian Lectures on Puerperal Fever, delivered at the Royal College of Physicians by Robert James Lee, M.A., M.D., F.R.C.P., late Assistant Obstetric Physician and Conjoint Lecturer on Obstetric Medicine at St. George's Hospital, Assistant-Physician to the Hospital for Sick Children, Great Ormond Street, &c.

In the first lecture the descriptions contained in ancient authors of this fever were carefully analysed, in order to show that "puerperal fever existed very much in the same form as in the present day at that period which we generally term 'classical,' when nosological distinctions were based upon symptoms, and the modern science of pathology had not been developed."

Although Hippocrates referred the symptoms of the fever to arrest of the lochia, there is evidence to prove that he was aware of the fact that there are other causes for it, namely, inflammation and ulceration of the uterus and retention of placental structures, and that the principle of sepsis, or decomposition, was clearly understood by him.

The lecturer briefly passed over the period intervening between Hippocrates and the authors of the sixteenth century, with a few remarks on the decadence of scientific medicine during the interval.

Instead of reviewing the various theories which have attempted to explain all the phenomena of the disease, the advantage was pointed out of limiting inquiry to the simple question, "How far the contagious theory of puerperal fever is supported, or contradicted, or neglected by the authorities of the seventeenth century."

It was shown that "there is all the proof which we require of Harvey's belief in the effects of a poison generated by decomposition to be found in his work on Generation."

Between then and the time of Cullen there were some additions made to the pathology of the subject, and it was seen that three points of investigation presented themselves—1. The cause or origin of the disease, in which the question of specific or contagious nature was involved; 2. The pathological changes which were observed in its various forms; and 3. The practical treatment suggested by the consideration of the former questions and the results of general experience.

One fact, as Cullen's remarks suggested, had gradually become evident, in his day, to those who were interested in the question of the cause of the disease; it was the great mortality that characterised its occurrence in public institutions and hospitals.

In the second lecture Dr. Lee examined at some length the claims of Dr. Gordon to be considered the first to establish the very important fact that puerperal fever is a contagious disease, and though others were credited with this honour, it was clearly shown that we are indebted to Gordon to an extent which we are only now beginning to realise. A comparative analysis of the works of Gordon and Semmelweise brought their respective merits into contrast, and showed to what extent they had contributed to the etiology of puerperal fever. The interval between them of half a century, Dr. Lee remarked, was occupied chiefly by those important investigations into morbid anatomy and pathology, both general and microscopical, which have contributed to the improvement of every department of our profession. It was from these inquiries that the various terms puerperal peritonitis, phlebitis, metritis, and many others originated.

The connection between the products of decomposing animal matter, particularly those bacterian forms known as micrococci, and the pathological conditions which those terms describe, was shown to support the view that puerperal fever might arise from a variety of causes, but that all its symptoms depended on the introduction into the system of the products of decomposition. If a portion of placenta were retained a patient might suffer from the disease without contagion introduced from external sources. Cancer of the uterus might prove fatal from the same kind of poisoning, so that when we discuss the question of contagion, we are to remember the origin and nature of the organic poison.

The researches of Prof. Heiberg, of Christiania, were frequently referred to in the course of these lectures. The practical question of the treatment of the fever resolved itself into a simple determination of the value of disinfectants locally and constitutionally. In almost all cases of puerperal disease we might assume that there is a local focus of decomposition and a constitutional infection. Solution of carbolic acid was recommended by Dr. Lee in the strength of one part in eighty of water as the best for local injections of the uterine cavity. To what extent constitutional antiseptics were beneficial could not be determined, and from experience it appeared to be best to treat the general symptoms on general principles. For the local symptoms resulting from inflammation, such as thrombosis, metritis, &c., the application of leeches and fomentations was found to be decidedly beneficial.

Many other points of interest were referred to, especially the complications of the fever, of which thrombosis of the pulmonary artery was one of the most serious.

THE CROONIAN LECTURES.

THIS course was delivered by Dr. Headlam Greenhow, who took for his subject Addison's Disease. He has given great attention to the peculiar phenomena first described by Addison. He firmly believes that the changes in the supra-renal capsules give rise to the other symptoms, and has diagnosed the disease in twelve cases. In eight of these post-mortem examinations verified his diagnosis.

As Addison's disease occurs almost exclusively in persons employed in active manual labour, and is almost entirely confined to the laborious period of life, as it is much more frequent in the male sex, and amongst those classes of labourers whose occupations expose them to accident or over-exertion, it has been inferred that it is likely to be due to traumatic causes, and the lecturer accepted this inference.

In his first lecture he delineated the principal clinical symptoms, and pointed out the remarkable varieties in their course and the pathological lesions which have been found to coexist with these symptoms in and around the supra-renal capsules.

His second lecture he devoted to the facts which point to the connection between the clinical symptoms and the lesion in the supra-renal capsules, urging that the general recognition of the reality of the disease has only been prevented by misconception.

In the third and last lecture he entered upon the more difficult subject of the obscure pathological and etiological processes, and set forth very clearly the evidence in favour of the connection between the symptoms and the nerve lesions which have been observed by various authorities. The implication of the nerves was, however, regarded as the consequence—not the cause—of the supra-renal disease, this being considered as mostly due to traumatic causes, although its development was probably favoured by constitutional proclivities.

THE LUMLEIAN LECTURES.

THE Lumleian Lectures were this year delivered by Dr. Lionel S. Beale, F.R.S., who took for his subject "Life and Vital Action in Health and Disease." Dr. Beale, as is well known, is the great champion of vital force, and it is pleasant to meet him in the Royal College of Physicians holding his own against the materialists. His utterances are of special value just now, when the germ-theory and other allied subjects are being re-discussed, and we would recommend our readers to study his lectures in conjunction with the debate at the Pathological Society.

In his first lecture he showed that in all parts of all living beings at every period of their life there are numerous masses of structureless living matter. From the lowest forms of life to the highest this living matter, or bioplasm, as he calls it, manifests phenomena which cannot be accounted for by physics, and which he therefore regards as due to a peculiar power—vitality.

In the second lecture he discussed the constitution of bioplasm, tried to show that there is an *absolute* distinction between bioplasm and matter in every other state, and that the construction of every living body is primarily due to vital rather than to physico-chemical action. In the course of his argument, the learned lecturer was brought face to face with the problem of the origin of life and with the theory of spontaneous generation. On these points we cannot do better than quote his words :—

> The far-fetched conjectures seriously advanced by some physical speculators concerning the origin of life serve to show what extreme difficulty has been experienced by those who have attempted to construct a plausible hypothesis by which the conversion of the non-living into the living might be reasonably accounted for. One great authority, dissatisfied with every suggestion, and being evidently convinced that no physical explanation of the origin of life upon our globe would ever be discovered, despairingly submits to us the proposition that life did not begin here at all, and that our earth was first peopled by the offspring of germs brought to us upon a fragment broken off from some distant orb that teemed with life. Whether even the simplest living forms would have survived after such a ride through space, unfortunately had not been determined by experiment, so the idea of our fauna and flora being derived from those of another world found little favour, and probably all who have considered the subject would now agree that it is probable that life-forms originated upon our globe, though there might be greatdifference of opinion concerning the precise mode of their origin.
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> "Evolution" is now supposed to solve the difficulty of life formation, but this term has had at least two meanings assigned to it. By some it has been restricted to the living world, while others have given to the term evolution a much wider signification, and have maintained that it should include not only the evolution of living forms from pre-existing living forms, but the formation of the living out of the non-living. There is, it is scarcely necessary to point out, the widest possible difference between these two doctrines, for while the one teaches that all living forms came direct from living matter without accounting for the origin of life at all; the other is a tenet of the fiery-cloud philosophy which teaches as a cardinal point that the evolution of life is but one of that great series of changes in which the evolution of all is comprised. But surely such an idea may, for the present, be regarded as a conjecture so extravagant as to be unworthy of serious consideration. Facts are wanting, and the arguments advanced in favour of the hypothesis are such as cannot have much weight, since it has been deemed necessary to bring forward, in their support, utterances of a prophetic character.
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> If, then, evolution is restricted to the living world, the origin of the first living thing will be still unaccounted for. The presence of a very simple living form seems to have been assumed; but whether that being came of itself from the non-living or arose in consequence of some prior changes, or was formed by an act of creative interference is not suggested by the terms of the particular form of the hypothesis under consideration. Neither is the precise nature of the first living substance indicated, and we are even left in doubt whether one or two or many forms of living matter existed when the first beginning of life appeared.
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> Now with reference to the origin of the first living matter several not improbable suggestions present themselves to the mind, in all of which, however, it is assumed that the change from the non-living to the living was sudden and abrupt, and not gradual.
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> What I particularly wish we should keep before our minds is that facts and arguments render it much more probable that the passage from the state of non-living to living is *sudden and abrupt, than that it is a gradual transition or scarcely perceptible gradation.* I should, however, clearly state that this inference is in opposition to the views of many authorities, and in particular is opposed to the clearly expressed opinion of one of the greatest discoverers and most acute thinkers of our time, who maintains that the conversion of physical into vital modes of force is continually taking place. It is suggested that the change from non-living matter to living matter is a transition easily effected and continually occurring. Of the facts in support of so startling a proposition I confess I am ignorant, nor have I succeeded in my efforts to discover any facts in the writings of those who appear to have accepted the conclusion in question, which has never failed to enlist advocates in its support from the time when it was believed that highly complex living forms were produced from earth or dew, to the present day, when the advocates of the doctrine are so terribly restricted in the discovery of parentless living particles.
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> I cannot but remark that the more minutely investigation is carried out—the more thoroughly and intently facts bearing upon the matter are examined—the more improbable, in my judgment, does it appear that any living form should be derived direct from the non-living. Notwithstanding all that has been recently written upon this subject, I cannot but feel surprised that at this time many good reasoners should decide in favour of the *de novo* origin

even of bacteria. Whether we consider the matter from the experimental side only, or study the evidence obtained in a general survey of nature, or carefully reflect upon the facts learnt from investigations concerning the properties of living and non-living matter, with the aid of the most perfect instruments of minute research now at command, or from other standpoints, the conclusion seems to me irresistible that the verdict of a jury of well-educated men would be against the direct origin of any form of living from any form of non-living.

Driven from one position to another, the advocates of spontaneous generation have entrenched themselves in the unassailable stronghold of experimental investigation. Here they may hold their own for any length of time, for no one can say what may be demonstrated by new experiments in the time to come. Nay, although the conflicting results of different skilled experimenters, whose experiments have been conducted upon the same principles and professedly in the same way, even to the minutest details, may shake the confidence of some in the experimental method of inquiry, it is certain that the teachings of experiment will prevail over all other information.

But the modern advocate of abiogenesis should be skilled not only in explaining facts, but in explaining facts away. The fact that bacteria germs exist in all parts of the higher organisms, in the most internal parts as well as upon the surface of man's body, is to be accounted for by their spontaneous origin! Although millions are to be found about the mouth and upon the surface, and it can be shown that it is easy enough for them to get from the outside amongst the tissues within, we are asked to believe that those inside originated there direct from the non-living, or, as an alternative proposition, that they were derived not from parental bacteria, but by transmutation from some of the constituents of the tissues, on the principle that a living fungus comes not from a fungus germ, but from a dying tree. The next suggestion will be that man, after all, is but an aggregation of lower forms, peculiarly conditioned for a time, but which assume their ordinary forms when their environment shall be modified, as it must be at death.

Erroneous conclusions of many kinds have been employed as facts in support of abiogenesis. When one finds that it is believed that fungi may be developed from oil globules, and other living organisms of a much higher type produced without parents out of organic matter, one fails to see any limit to the support that may be gained to the cause. Volumes of facts and arguments hitherto advanced in favour of abiogenesis may be republished without in the slightest degree modifying the real state of the case. What is now required is well devised experiment, and that is all. No resuscitation of old arguments and doubtful facts, however ably the task is performed, will in the slightest degree increase the cogency of experimental proof, and in the absence of new experiment such facts and arguments will avail nothing.

I think we may be satisfied that before long the advocates of spontaneous generation will have to rely upon the production of the lowest organisms only. The only view in any way tenable at this time is, that such organisms as bacteria are the only ones that can, under any arrangement of conditions possible to an experimental inquirer, be formed anew, and that these alone, at any period of the world's history, sprang direct from the non-living. All are of extreme minuteness, many of the forms being so very small that they could not be identified with a magnifying power of less than eight hundred diameters. These are the smallest, simplest, and probably lowest forms of life known. That multitudes do now spring from pre-existing forms is absolutely certain, for the process can be seen. Whether some spring direct from the non-living is the question. Those that are supposed to be formed anew are very like those that have had a progenitor, and from those supposed to have been produced anew, forms exactly like those derived from undoubtedly pre-existing forms result. It cannot be pretended that new forms of existence are produced anew. No matter how the conditions are varied, the living forms supposed to result resemble known living forms, and give rise to forms of the same kind.

But, as I have before remarked, the question of the origin of bacteria can be only determined by experiment. All irrelevant considerations in favour of abiogenesis ought now to be left in abeyance. The assumed *de novo* origin is contrary to what goes on throughout the whole kingdom of nature, and the only exception which there is the remotest possibility of establishing, is the spontaneous origin of some of these lower forms of life. While, therefore, it is allowable to permit ourselves to be influenced by general evidence against a new and exceptional doctrine, which a few observers seem very anxious to establish, we may fairly insist that only evidence of the most convincing and demonstrative kind should be accepted in its support. As regards the validity and reliability of the most recent experiments for and against the doctrine, I offer no opinion. Time must be allowed for others to repeat the experiments; and, for my own part, I could express no opinion unless I had been present, and had carefully watched each experiment in every stage. As far as I can judge, the reports of recent results are not more convincing than were those that were adduced years ago, many of which have been discarded and proved to have been unreliable from want of care, or from defects in the method of procedure.

If the formation of a bacterium germ, direct from non-living matter, be possible, three very remarkable series of changes, as it seems to me, will have to be brought about. Whether any means will ever be discovered of effecting these changes is surely most doubtful.

First, the atoms of the non-living substances must be separated from their combinations.

Secondly, the atoms will have to be re-arranged to constitute groups of which the organic matter is made up.

Thirdly, the groups of atoms must be made to live.

What facts known, I would ask, render it likely that air, rarefied or condensed, or pressure of any degree or of any special kind, or any degree of heat, or light, or any conceivable modification of physical or chemical conditions, would, at the same time, account for the pulling asunder and joining together of atoms, and for the conference of new and peculiar powers of growth, of movement, of division, and the formation of new substances? In short, it is not easy to conceive, in the imagination, the several steps which result in the formation of a living bacterium even from *organic matter*. But the first germ must have sprung direct from matter that never had lived nor manifested phenomena in any way like those of life. Let us try to imagine a living germ being produced out of non-living matter. Atoms of many substances must be conceived as separating from one another, and then recombining. Attractions and affinities must, in the first place, be overcome, then the forces that effected the change must cease to operate; and these must, somehow, be exerted again. By what means the separation of atoms is effected cannot be suggested, neither can we conceive how the atoms are caused to recombine in a definite way. The supposed phenomena would be really more complicated than I have represented. For atoms are not related to one another—atom to atom, but group to group. How the atoms are grouped, and how the groups are related, how the groups act and react upon one another, and new groups are formed—what makes the atoms combine and begin a new course which may continue on and on for ever, cannot be conceived. Upon the whole, the production from non-living matter of any living form, however simple, must be regarded as most improbable.

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Every attempt to explain the formation of any definite organ by what is called evolution and the operation of physical causation, independently of intelligence, and of guiding governing power, has signally failed. Even with the aid of that wonderful "nature" with a capacity for differentiating herself, which the evolutionists have been obliged to call to their aid, we get only a very confused and inadequate notion of the formation of any single tissue of any one organ—the eye for example. Let it be fully explained, in full detail, according to evolutional law how the formation, not of the eye as a whole, but of one only of the tissues of the eye is carried out. Such an explanation would have far more weight than the assurance that the eye may be compared with a telescope, or that it exhibits an indelible stamp of its lowly origin. By vague suggestions of this sort, nothing whatever is proved, or even rendered probable. An interpretation of facts is authoritatively given, favourable to certain preconceived views, and that is all. Other interpretations might be given, but for the time all others are excluded, by authority which rules as if it were infallible.

No one has yet been able to account for the arrangement even of the nerve fibres of a nerve plexus of the eye or of any other organ. The little papillæ of the frog's tongue are, as I have remarked, organs admirably adapted for investigation, and I wonder that these have not been selected to illustrate the theory of evolution. They can be easily obtained for study, and are far less complex, and more easy of investigation, at every stage of development, than the eye. (*a*) A discussion concerning their formation, and the laws by which it is governed, would be extremely interesting. It is not very likely that evolutionists will accept this or any other challenge for the purpose of testing the application of their doctrine to the details of anatomical structure. They prefer generalities; and as long as they are able to make people believe that their doctrines are true, and that their prophecies will be verified, they are wise. If they are encouraged to persist in calling attention to general characters, to the exclusion of details, and to select, out of nature's storehouse, just those facts which support their own theories, taking no account whatever of facts which cannot be explained by them, they will be able to hold their own, but whenever they are forced to go into detail, and study the minutiæ of the development of an individual organ, the difficulty of the application of the doctrine will be apparent enough to every one, and the farther the investigation is pushed, the more will the difficulties to be surmounted by the evolutionists increase, as regards degree and number.

SOME NEW RESEARCHES ON THE CAUSE AND ORIGIN OF FEVER FROM THE ACTION OF THE SEPTINOUS POISONS. (*b*)

By B. W. Richardson, M.D., F.R.S.

This was a continuation of the author's paper read before the Society ten years ago, viz., in 1865. The author commenced his present lecture by giving a *résumé* of that which he had read in 1865. In that communication he had shown, from a series of experiments made with the serous fluids derived from a patient suffering from pyæmic fever, and under the care of Mr. Spencer Wells, that such fluid when inoculated into healthy animals, produced a distinct and fatal disease which could be transmitted to other animals through several series or generations. To the poisonous matter thus produced he had given the name of *septine*, and he had laid before the Society specimens of salts obtained from the septinous matter, viz., a hydrochlorate and a sulphate, both of which possessed poisonous properties similar to those belonging to the mother liquor. He had inferred, therefore, that the poisonous substance was of an alkaloidal character. He had also, in the same paper of 1865, stated the following conclusions as the result of his experimental researches.

1. All the organic disease-producing poisons are modified—*i.e.*, poisonous secretions.

2. The secretions are rendered poisonous by two processes: (i.) by contact with organic poison pre-existing; (ii.) by direct decomposition.

3. The poison of each secretion possesses several qualities: it can only be absorbed by particular channels, and it can only provoke farther disease by coming into contact with a secretion allied to that from which it was itself derived.

4. The reproduction of the poisons depends on the continuance of the process of physical changes in a continuous secretion. The force of secretion is the force of reproduction.

5. The poisons kill by various means: (i.) by the secretion causing obstruction of necessary function; (ii.) by exhaustion from excessive secretion; (iii.) by extreme irritation of nerve and reflex injury; (iv.) by the absorption of the poisoned secretion into the blood and disorganisation.

From this point Dr. Richardson went on to describe that since the announcement of the facts had been put forward originally respecting septine, similar results had been obtained by Coze and Felz, Davaine, Béhier, Vulpian, and MM. Thin and Clementi. It had further been discovered by Davaine that the intensity of the poisonous matter increased in the most marked degree, and in a manner that seemed to defy computation, with the transmission of the poison through fresh series of animals.

The author now proceeded to the details of his new research, illustrating it step by step by experiment. He had put to himself the question, Why does the poisonous septinous matter produce a definite order of morbid symptoms, and why, specially, does it produce fever? In the first parts of this inquiry he had put aside altogether the animal body, and had tried to learn what effect the poisonous substance would exert when it was brought into contact with other organic bodies of unstable composition. Would it act like ferment on saccharine substances? Would it modify the process of acetification? Would it interfere with the oxidation of readily oxidisable matters? Without entering into details that were negative, he found, he said, one affirmative fact from his experiments, upon which he should base to-night a new theory on the cause of the fever and other symptoms that occur in the living animal under the influence of septine. He found that it was the property of all the septinous poisons to liberate oxygen from that solution of oxygen known as peroxide of hydrogen. This fact was illustrated by showing the action of minute portions of pyæmic poison, vaccine, pus, decomposing blood, and other similar bodies. The solution, which contained ten volumes of oxygen, was placed in tubes, and was inoculated with the various specimens of septinous matter, with the effect in each case of causing a rapid evolution of the oxygen. The same result was produced by the action of fibrine on cellular tissue, but was shown to be negative with mucus, upon which fact, the author incidentally remarked, a new diagnostic test between mucus and purulent matter is established. The septinous matter in every form seemed, from its action upon peroxide of hydrogen, to have been derived, either from fibrine or from cellular tissue, or from derivations of these bodies.

From the action of the septinous product on oxygenised water, the author indicated their action on oxygenised blood. To a specimen of blood which had been charged with oxygen, he added solution of the peroxide to saturation. Into this he now plunged a thermometer, the bulb of which was armed with a little fibrine. Upon this oxygen began to liberate from the blood with evolution of heat, the mercury in the thermometer rising four degrees.

After adding some other experimental facts and summing up the results of all the facts he had placed before the Society, Dr. Richardson stated the theory at which he had arrived as to the effects of the septinous matter on the living organism, with special reference to the febrile state. The theory was that the septinous product acts upon the blood in the extreme circulation, when it

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(*a*) "Protoplasm," 3rd edition, p. 349.

(*b*) Abstract of a paper read at the Society of the Medical Officers of Health.

accumulated in sufficient quantity by liberating a portion of the oxygen. Upon this occur the same phenomena as had now been observed in experiment; but, as the poisonous organic product is itself destroyed in the process, the effects it produces may remit until a new charge of the poison has been produced in sufficient quantity to cause a repetition of the febrile state. Thus the theory suggested a simple reason for the remittency of fevers.

The various phases of febrile disturbance were next adverted to. It was indicated that in some instances, as in the most malignant forms of small-pox, the blood may be so charged with septinous matter as to be unable to take in oxygen in the process of respiration, then death takes place by asphyxia after a brief period of febrile heat. In another variety of cases the liberation of the oxygen is so persistent that remission of the fever is hardly perceptible; and in other exceedingly light cases, where the quantity of poison is very small and is not reproduced, one sharp paroxysm of febrile phenomena may be all that is witnessed. In cases of abscess or of cavity in the lung this same order of phenomena may be observed in a modified degree.

The lecturer continued by showing that some chemical agents added to water charged with the peroxide solution tended to fix the combination and to neutralise the action of substances which liberate the oxygen. An experiment illustrating this fact by the action of quinine brought the lecture to a close.

SPECIAL DEPARTMENT.

QUARTERLY REPORT ON DERMATOLOGY.

By H. S. Purdon, M.D., L.R.C.P.,

Physician to the Royal Belfast Hospital and to the Hospital for Skin Diseases, &c.

IODOFORM IN GRANULAR EYELIDS.

Although hardly connected with the subject of Dermatology, still we think that the following will interest our readers, especially as the treatment of granular eyelids is so unsatisfactory, Dr. Barber (*Detroit Review of Medicine* for January, 1875) records a case in which every known remedy had been tried without success. "Seeing," he says, "in a medical journal an account of the successful treatment of an intractable ulcer of the leg with iodoform, the idea suggested itself that it might be 'good for sore eyes;' and he had twenty grains put in an ounce of glycerine, and applied some to the inner surface of the lids. In came the patient next day, with a sweet smile and a whitening cornea."

The patient got well without any drawback in a short time. Dr. Barber has tried the remedy in quite a number of cases since with very gratifying results.

AFFECTIONS OF THE SEBACEOUS GLANDS.

Dr. Edward Wigglesworth, jun. (*Boston Medical and Surgical Journal*, January, 1875), writes:—

The affections of the sebaceous glands, as far at least as frequency of occurrence is concerned, play in dermatology a *rôle* second only to that of eczema. The vernix caseosa of the fœtus, the crusta lactea of the infant, the "maturating pimples" of youth, and the seborrhœa of the scalp, so frequently causing loss of hair during early maturity, are all merely manifestations of varying action on the part of the sebaceous glands.

A very common affection, and one particularly distressing to the patient, on account of the personal disfigurement involved, is comedones, the so-called "black-heads" or "skin-worms," in the language of quack advertisements. These occur especially upon the face and neck, also upon the breast and back, more particularly upon their upper parts, though they may occur wherever external influences tend to cause the obstruction of the sebaceous and hair follicles, as in the case of workers in metals, printer's ink, tar, &c. The disease consists in an over-accumulation of the natural secretion, with perhaps a deficiency in its more fluid constituents, with epithelial and gland cells, fat drops, embryonic hairs, often acari folliculorum, and sometimes crystals of cholestearine. This plugging of the follicles may be near their exits and quite superficial, may extend throughout their whole length, or may be deep-seated, in which latter case it tends to result in the formation of acne pustules. Where the skin is thick, the hair follicles long, and the sebaceous glands deep-seated, the heaping up is apt to occur at the lower and closed end of the follicle. The black colour of the free extremity of the sebaceous plug is due simply to dirt, the dust of the air being caught and retained by the oily and exposed surface of the plug.

The therapy consists in removing the plug and restoring the glands to their normal conditions. Constitutional treatment is also frequently of service, as comedones seem to be more frequent when phthisis, scrofula, or other general processes interfering with nutrition are present. The inspissated plugs are best removed by placing a watch-key over each of them in succession, and then pressing steadily and firmly down.

Comedones are usually only a local affection. When constitutional treatment is required it is usually on account of the anæmia or general debility of the patient, and this is often due to a scrofulous or phthisical habitus which interferes with the nutritive processes, and amongst others with those of the sebaceous glands. Tonics are therefore called for, especially the nutritive oils. Olive-oil, half an ounce after meals, is nutritive and slightly laxative. The animal oils are perhaps preferable to the vegetable. Cod-liver oil may be freely given, alone or with a little glycerine. Half an ounce of glycerine added to a six-ounce mixture in case of very many medicines tends to conceal any disagreeable taste. This applies particularly to the oils, and especially if a few drops of oil of cinnamon are added, and the mixture well rubbed together. Some writers also hold that the internal administration of oil exercises a local effect upon the sebaceous glands, and increases in their secreted products the amount of olein present, thus preventing the inspissation of the sebum, rendering it less like an irritating foreign body, and aiding its elimination from the follicles. They base their theory upon such facts as the rarity of comedones in fat people; the immunity from this disease of patients with oily skins, as, for example, old drinkers, or of patients with fatty livers; and upon the results of such experiments as that of Boussingault, who found that in the case of a duck fed exclusively upon butter for a fortnight, the butter "oozed from all the pores of the body." But such views certainly lack verification. Such writers recommend also instead of oils the exhibition of glycerine, one drachm three times daily, in the belief that a base is thus supplied which, by uniting with crystals of stearine and margarine in the sebum, renders them fluid, and aids their elimination. But here certainly the direct external application of the glycerine would seem to possess superior advantages.

VENEREAL ULCERS.

Dr. Godon (*Pacific Medical Journal*) publishes a series of cases of venereal ulcers treated with iodoform, and concludes his paper with the following remarks :

1. That iodoform is a therapeutic agent producing more certainly, and more promptly than all others ordinarily employed, the cicatrization of syphilitic ulceration in general.
2. That in the treatment of chancroids, iodoform is in some manner a specific by the promptitude with which it produces cicatrization, and this too without pain.
3. That iodoform in the treatment of simple or virulent buboes can be employed in the form of an ointment as a resolvent during the early stage, with more success than any other agent.
4. Iodoform acts as a topical agent and also as a local anæsthetic. That by its employment in these cases it effects a cure without producing any pain, obviating the dread of burning and the attendant pain which deter so many unfortunates from applying immediately to the surgeon for relief. That the rapid cicatrization which it causes is owing to the simplicity of the dressing, which does not irritate the diseased parts, to the absorption of the secretions by the iodoform powder, to the antiseptic properties of the medicament, and to the presence of iodine, which acts favourably on venereal ulcerations in general.

THE POISONOUS ACTION OF TINCTURE OF ARNICA UPON THE SKIN.

Dr. James C. White publishes in the *Boston Medical Journal*, January 21, three cases of the above. He says the nature and cause of the affection of the skin in these cases cannot be misinterpreted. In all of them we have an acute inflammatory process, confined to the upper dermal layers, and manifesting itself, according to the stage reached, by the following appearances : hyperæmia, papules, vesicles, excoriations, crusts, and scales, in regular sequence. The local sensations were intense itching and some degree of burning in the parts affected. There was no constitutional disturbance. In course, character, and sequence of the lesions in their development and retrogression, in the intensity of the subjective and absence of constitutional symptoms, the affection is unmistakably acute eczema. It may be that cases occur in which the inflammation extends so deeply and reaches so high a degree as to warrant the title dermatitis, but I have never seen them.

The cause was also plainly manifest. The inflammation followed in all the cases the application of tincture of arnica to the skin as a fomentation. In one of the instances, the first, the epidermis may have been slightly broken; but in the others the skin of the parts was whole and healthy at the time of the applications. The inflammation began to show itself after intervals varying from a few hours to several days, and was confined to the part to which the application was made, or extended from this as a centre. In the last case the disease was developed also upon the other knee and upon the face, but by direct contact, nevertheless, with the exciting cause, for the right knee was in contact with the left during the nights that the fomentations were applied to the latter, and the face was frequently rubbed (a constant habit of the patient) with the hands while applying the fomentation. That the hands were not likewise affected may be accounted for by the greater resistance to absorption offered by the thickened epidermis of the palms.

These three cases will serve, as well as more which might be presented, as typical illustrations of the action of arnica at times upon the skin. The affection, as will be seen, follows a very regular course in the character, distribution, and duration of its lesions, differing widely in some of these respects from the wayward manifestations so peculiar to the action of rhus. Like the latter, arnica must therefore be regarded as an irritant poison when applied to the skin of some persons, but of less intensity and probably of less certainty in its action than rhus. With regard to this latter point, the proportionate frequency of poisoning after its external use, I do not know that we can form any judgment. There can be no doubt that tincture of arnica is very often used in the same way as in the cases above given. It has long enjoyed an exceptionally permanent reputation, and almost miraculous healing powers have been attributed to it. Oesterlen says that " its reputation dates from the times when magicians carried on their hocus-pocus with it; from these it passed into the hands of quacks, and finally to physicians." There is scarcely a symptom of disease which, it was at one time thought in Europe, its internal administration could not successfully meet.

JAPANESE LEPROSY.

Dr. Ashmead writes to the *Philadelphia Medical Times*, Jan. 14, 1875, as follows :—

There is one disease found here which I have never seen described in any medical work or journal; it is called " Japanese leprosy." I have been so fortunate as to see four cases—two very perfect ones. One, a man 40 years of age, married, a samourai, that is, a two-sworded retainer of a prince. He had suffered some six years; the symptoms gradually increasing until, when I saw him, he was covered with brownish mahogany-coloured spots, not elevated above the surface, varying in size from an inch to four or five inches in diameter; these were distributed over the trunk and limbs. His face seemed entirely covered with this discolouration, some parts a lighter and some parts a darker shade. His legs were œdematous, as also was his face. The most astonishing peculiarity of this eruption was an entire loss of sensibility in these spots, whilst outside of their circumference he had perfect sensibility. Another peculiarity was œdema of the eyelids, with inability to close them. On his attempting to do so, a space of a quarter of an inch separated them. Beneath and throughout the conjunctiva was a deposit of brownish mahogany-coloured pigment. This accumulation was greatest at the inner canthus. Another symptom, and, as the native physicians tell me, an infallible one in point of diagnosis, was entire loss of the eyebrows; giving the man a most curious expression. The hair of this patient's scalp had not come out, but in some cases it does so. The patient complained of no trouble elsewhere; no itching of the skin; urine high-coloured, specific gravity normal. The only fault he had to find with his disease was the peculiar appearance it gave him, and the people in the public baths not liking to bathe with him. It is not a contagious disease. The skin on his face had a shining appearance, an important point in diagnosis. In the spots on his limbs I thrust needles to the bone without detecting the slightest sensibility; this, too, is diagnostic. The disease is hereditary and considered incurable. I placed the man under treatment with cod-liver oil, iron, good food, beef, &c. He continued to improve slightly until an insurrection broke out in his province, Saga, when I lost sight of him.

The second case was very similar, with few exceptions. In this case the eyebrows had not been entirely lost, his hair was coming out, and he had partial paralysis of lower limbs, also an endocardial murmur. I suppose this second case was complicated with "beri-beri." This case, too, I have lost sight of, owing to the Formosan trouble. He was placed under the same treatment, with digitalis added. I am sorry that I am unable to give you any further points on these cases, but hope soon in my hospital practice to study the disease fully. I would further state that case No. 1 said that the exciting cause in his case was hardship and unwholesome food during an insurrection, and that his father had died from the same disease.

TREATMENT OF ANAL VEGETATIONS.

M. Cruveilhier, of the Hôpital St. Louis, believes with the majority of surgeons that these sessile or pediculated vegetations are not dependent on the syphilitic virus, and that therefore internal treatment is not appropriate. They must be destroyed locally in a radical manner, for if a single one is allowed to remain, however small it may be, it will form the starting-point of new vegetations, which will multiply without measure. He has employed excision with curved scissors, followed or not by cauterisation with diluted perchloride of iron. But he prefers a milder and often more efficacious remedy, pure chromic acid, which, applied to the small tumours, the healthy parts being protected, mummifies them and causes their decay. This caustic is less painful than nitric acid, or acid nitrate of mercury, and less often causes inflammation in the neighbourhood. If these means fail, the operation of removal with the knife must be resorted to.—*Revue de Thérap.*, 15, 1874.

ABOUT BOOKS.

Consumption in Australia. By C. E. Reeves, B.A., M.D. Melbourne: J. Brooks. 1874.

Some time since we favourably noticed Dr. Reeves' work on "Heart Disease in Australia," and now have the opportunity of reviewing his latest *brochure* on consumption occurring in the same country, the climate of which is decidedly more favourable for phthisical patients than that of England, from whence a large number of consumptives are annually sent. Our author, however, states that he "would beg particularly to impress on the medical profession in England that to send consumptive patients out to Melbourne under the idea that they will be able to earn enough to keep them and yet get well, is a mistake," a maxim to which we agree, as the climate of Australia, to say nothing of other matters, is liable to sudden falls in temperature.

Our author states that instead of phthisis being tubercular, as in Europe, it is usually inflammatory, and passes with rapidity through the stages of congestion, induration, and softening, followed by the formation of a cavity, generally accompanied with severe hæmorrhage. Another form is observed. "A portion of the lung is struck with gangrene from obliteration of some of the branches of the pulmonary artery, the diseased portion of the lung is absorbed (*sic*), there is no expectoration, and in some cases no cough or expectoration until the lung around the cavity becomes inflamed."

Bronchial irritation and inflammation of the lungs are fruitful sources of consumption, especially in those predisposed from hereditary causes to the disease under notice. The characters of the first stage, or *the congestive*, are—fever, more or less intense, chills and sweats, tongue white or brown, pallid face, and pulse varying from 100 to 120, or even 140, urine and fæces offensive, pain in one or other of the upper lobes of the lungs, aggravated on breathing, cough varying in intensity the nearer the alteration is seated to and irritating the bronchial tubes, expectoration, first of clear mucus, then tinged with the colouring matter of the blood, and the fine crepitation characteristic of congestion. Moreover, our author is of the opinion (page 56) that acute congestion of the ultimate air-cells is, like bronchitis, "becoming common in the colony."

Whether his readers will agree with the views advanced in Chapter VI. on the "Influence of Acute and Chronic Gangrene in producing Consumption" is not for us to say, gangrene of the lungs being rare in this country, and generally causing death before consumption has had time to develope itself. May not our author have mistaken gangrene of a portion of mucous membrane lining a bronchial tube, giving rise to fœtor and other symptoms of the disease—a form of disease pointed out by Walsh—for *true* gangrene of lung substance?

We have a Chapter (IX.) devoted to "Hydatids of the Lungs as a Cause of Consumption, with Cases," and in which our author recommends for internal use iodide of lead as especially useful.

In conclusion, we candidly say that the work contains many new and valuable hints on pulmonary diseases.

Consumption and Tuberculosis, and their Specific Treatment by the Hypophosphites. By John Francis Churchill, M.D. London: Longmans, Green, and Co. 1875.

Of late years various treatises have been published on the pathology and treatment of phthisis. Nearly every author has some new method or theory to offer. In the large work before us Dr. Churchill (late of Paris) proposes and endeavours to prove that the *specific* remedy for the tubercular diathesis consists in the use of a preparation of phosphorus combining the properties of being both assimilable and oxidisable. Moreover, our author holds the opinion that "when death takes place in cases treated by the hypophosphites it is due either to the pre-existing lesions, or to the occurrence of some secondary or accidental complication," whilst in no case after the employment of the hypophosphites is death brought about by *new* tubercular deposits, unless the treatment is completely stopped whilst the patient is still exposed to the causes which produce tuberculosis. Dr. Churchill is very particular as regards obtaining the hypophosphites pure, and only uses those prepared by Swann, of Paris. These have, we believe, long been advertised in connection with Dr. Churchill's name, after the manner of quack medicines, and this fact has gone far to cause the Englsh profession to look with distrust upon him, As regards the *permanent cure* of phthisis, at page 38 he writes as follows : "In the last stage of phthisis the accidental inflammatory complications are much more serious than in the first two stages, and hence it follows that attention to hygienic conditions is much more important at this period. *The number of permanent recoveries in the third stage would have been exactly double if the patients had been in comfortable circumstances.*"

Dr. Churchill holds that the formation of a cavity is one of the modes of cure in phthisis, and that consequently the disease in the third stage is not, all other things being equal, of a more unfavourable prognosis than in the second stage. Now it is well known that the softening of a tuberculous deposit is usually accompanied by the deposition of new tubercular matter. Hereditary phthisis, he believes, is more amenable to treatment by the hypophosphites than the other varieties.

Our author next mentions some of the complications of the disease under notice, such as hectic, diarrhœa, fatty degeneration of liver—first pointed out by Louis—and laryngitis. The last-mentioned he holds is the most formidable, but may be relieved by his "stœchiological inhalants," one of which is mentioned—viz., pyrogallic acid, to be recommended in hæmorrhage from the lungs.

In the chapter devoted to "the mode and rules of action of the hypophosphites," the researches of Taylor, Vintras, Thorowgood, and others who have successfully used these remedies are quoted. Indeed, we think highly of them, but do not for one moment regard the hypophosphites as a specific. The author thinks that the dose generally prescribed is much too large, and he rarely gives beyond six grains a day. The hypophosphite of iron, he states, often causes hæmorrhage from the lungs, and the preparation to be used, and which he prefers, is the hypophosphite of lime.

We have a fair chapter on the theory of tuberculosis ; but we do not like the way he speaks of such men as Walshe (page 282), Williams, and others, names well known and respected by the profession.

Our author goes at great length into the important subject of climate and prevalence of phthisis, and shows that he is well acquainted with this department ; indeed, we may safely say that phthisis is prevalent in every clime under the sun. An immunity from tuberculosis has been claimed in turn for almost every country.

Cod-liver oil, pancreatic emulsion of fat and other remedies are noticed, but of course in our author's eyes are inferior to the hypophosphites.

We have thus gone through that part of the work which may be looked upon as a reproduction of his French treatise, published before he went so far as to appeal to the profession in favour of secret remedies.

Nearly half of the volume is taken up by the consideration of the author's "stœchiological medicine," one of which has already been mentioned ; indeed, it is the only one he names. We will let the author speak for himself (page 406) : "I have not stated, nor do I intend to state, what these stœchiological inhalants are. I have come to this determination very sorrowfully and reluctantly, but resolutely, and only after mature consideration ; I think that in doing so I am acting for the best, not only for myself, but in discharge of the obligations which I, as an inventor, owe to society." From the preceding extract our readers can form their own opinions of the value of these inhalants. Though not "very sorrowfully" nor "reluctantly," we have long since "resolutely" come to the "determination" to regard the use of all secret remedies as quackery, and their proprietors as quacks.

Note on Salicylic Acid. By Edward R. Squibb, M.D., of Brooklyn, New York. Read before the Medical Society of the State of New York, February 2nd, 1875, and by permission printed in advance of the Transactions. Brooklyn. 1875.

In publishing this pamphlet the author simply wishes to call attention to the subject, to give a brief outline of its bibliography, and to offer some remarks as to its sphere in medicine. These objects we think he has succeeded in accomplishing. The author states that salicin was discovered by Leroux in 1830, and that the acid was prepared by Löwig and Weidmann from the flowers of *Spiræa ulmania* (common meadow-sweet). Its powerful antiseptic properties have lately brought it into notice.

According to our author its alleged advantages over other antiseptics are—

1. That it is far more powerful and effective in smaller quantities.
2. That it is in all quantities necessary for complete effectiveness entirely devoid of irritant action upon the living tissues.
3. It is said to reach and prevent processes of decomposition which are beyond the reach of all other antiseptics or antiferments.
4. In quantities said to be thoroughly effective, it is entirely odourless and tasteless and harmless, whilst it has no poisonous effect in any reasonable quantity.

Dr. C. R. Drysdale's paper on *The Antecedents and Treatment of Tertiary Syphilis* has been published in pamphlet form (Baillière and Co.) We gave a brief account of this paper in our last, and no doubt many of our readers will be glad to possess it. It contains not only the author's accession to the ranks of those who employ mercury in small doses, but a criticism of the views of various recent writers on the subject.

Mr. Sampson Gamgee has reprinted from the *Birmingham Medical Review* an admirable essay entitled *Sir Charles Bell and Sir James Simpson: a Biographical Study.* It is very pleasant reading.

AT THE SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, March 23rd, 1875.

Sir James Paget, Bart., F.R.S., D.C.L., LL.D., in the Chair.

Mr. Walter Rivington, M.S. Lond., F.R.C.S.E., related a case of

PULSATING TUMOUR OF THE LEFT ORBIT, CONSEQUENT UPON A FRACTURE OF THE BASE OF THE SKULL, CURED BY LIGATURE OF THE LEFT COMMON CAROTID ARTERY, SUBSEQUENTLY TO INJECTION OF PERCHLORIDE OF IRON, AFTER DIGITAL COMPRESSION AND OTHER MEANS OF TREATMENT HAD FAILED ; WITH REMARKS AND AN APPENDIX CONTAINING A CHRONOLOGICAL TABLE, AND A RESUME OF THE RECORDED CASES OF INTRAORBITAL ANEURISM.

The author prefaced the narrative of the case with an historical *résumé* of the views and observations placed on record by previous writers. The first known case was described by Mr. Travers, in 1809, as a case of aneurism by anastomosis, and the second by Mr. Dalrymple in 1812, under the same designation. Notwithstanding the observation of Guthrie, in 1823, of a case in which similar symptoms existing on both sides were shown by post-mortem evidence to have resulted from an aneurism of each ophthalmic artery within the orbit, the views of Travers were generally adopted for many years, as explanatory at least of the idiopathic cases of intraordital aneurism. Mr. Busk, in 1835, met with a case which arose gradually after a fracture of the base of the skull, and was able to cite the prior case of a boy, under the care of Mr. Scott, in 1834, at the London Hospital, in which protrusion and pulsation of the eyeball supervened after an injury to the head, occasioned by a fall into a ship's hold, and in which the subsequent occurrence of violent arterial hæmorrhage from the nose rendered it necessary for Mr.

Scott to ligature the carotid; a cure resulting. Mr. Busk combated the views of Travers, and advocated the view that his own case and previous ones had been cases of ordinary aneurism affecting the ophthalmic artery within the orbit. His paper had a marked influence on subsequent observers, as might be judged from the fact that M. Pétrequin, Mr. Curling, M. Bourguet, M. Legouest, Mr. Zachariah Lawrence, M. Gioppi, Dr. Morton, and Dr. Schmid of Odessa, all diagnosed their cases as examples of aneurism of the ophthalmic artery; whilst M. Démarquay, Mr. Nunneley, Mr. Jos. Bell, Mr. Ernest Hart, Dr. Delens, Mr. Holmes, and others who had ably and successfully opposed the view of Travers, had repeated, with reinforcements of their own, Mr. Busk's arguments. To Mr. Nunneley was due the chief credit of first directing forcibly the attention of pathologists in England away from the orbit to the vessels lying behind it; and he showed from post-mortem observations in two out of six cases which he had met with, that the symptoms might be due to an aneurismal affection of the internal carotid artery in the cavernous sinus, or an aneurism of the ophthalmic artery within the skull. The record of Mr. Bowman's well-known case, by Mr. Hulke, in which no change was found in the arteries, but in which the cavernous, transverse, and petrosal sinuses were obstructed by clot; and M. Aubry's case of obliterated inferior petrosal sinus; and MM. Wecker and Richet's fatal case, were all so many indications that aneurisms within the orbit were only exceptional conditions. A brilliant light had been thrown on the pathology of the traumatic cases, by the publication of two cases under M. Nélaton, in which all the symptoms had resulted from a direct communication between the internal carotid artery and the cavernous sinus produced by the fracture of the base of the skull; and a similar case observed by M. Hirschfeld. These cases, and cases of spontaneous rupture of an aneurismal carotid, related by M. Baron, in 1835, and M. Gendrin in 1841, were little known in this country until the publication of Dr. Delens' monograph, and Mr. Holmes's lectures at the College of Surgeons. The author's own case was briefly this. W. C., aged 24, was admitted into the London Hospital in July, 1873, with a fracture of the skull. Six weeks later the patient heard a noise in his head, like wind blowing; the eye gradually became prominent, pulsation of the eyeball was seen for a day or two, followed by the formation of a pulsating and thrilling tumour between the eye and the margin of the orbit. There was a *bruit*, continuous, with reinforcements, and the *bruit de piantement* could be heard at intervals. At the time of the commencement of the aneurismal symptoms, Mr. Reeves was in charge of Mr. Rivington's wards, and carried out very thoroughly digital compression, without making any impression on the disease. Ligature of the carotid was discussed, but negatived at a consultation. A further trial of compression, digital, instrumental, and direct, having been made without effect, combined with veratrum, and the affection at the end of a year being decidedly aggravated, threatening extinction of vision and preventing work, an injection of five drops of a neutral watery solution of the perchloride was made; but this proving to be insufficient in quantity to cause sufficient coagulation in the dilated ophthalmic vein, and a second injection being impracticable, on account of subsequent swelling, the carotid artery was tied by Mr. Rivington, and effected a cure of the disease; a slight *bruit* only remained, but superficial ulceration of the cornea occurred a few days after ligature, and resulted in opacity. The author then discussed at length the causation, symptoms, pathology, differential diagnosis, and treatment of the affection, the following being a few of his conclusions. 1. Of 62 recorded cases, 29 were idiopathic, and 33 traumatic; of the 29 idiopathic cases, 11 were affected on the left side, and 13 on the right; whilst of 33 traumatic cases, 22 were affected on the left side, and nine on the right, the side affected not being mentioned in the others. Thus, the preponderance of cases in which the affection had existed on the right side was entirely maintained by the traumatic cases. 2. Pulsation of the eyeball and a pulsating tumour might be absent, but no case should be regarded as one of so called intraorbital aneurism unless, in addition to exophthalmos and chemosis, a *bruit* were present. 3. The only true basis for the pathology of intraorbital aneurism was the record of post-mortem examinations, to which allusion had been already made. By this the doctrine of aneurism by anastomosis had been negatived, and a variety of morbid conditions had been disclosed (*vide supra*). 4. It was of great importance to recollect that, in eight ought of twelve cases examined after death, the ophthalmic vein had been found varicose and enlarged, and in four certainly had formed the pulsating tumour observed during life at the orbital margin. The distension of veins might reach to the bridge of the nose and the forehead. After specifying the distinctive features of erectile tumours of the orbit, pulsating encephaloid cancer, spheno-orbital meningocele, and rejecting as efficient causes of the affection arterio-venous aneurism of the orbit, cirsoid aneurism, and aneurism by anastomosis within the orbit, and morbid conditions of the sympathetic nerves and ganglia, the author pointed out the necessity of studying the mode of occurrence of the symptoms, the nature of the paralytic symptoms of orbital muscles (if present), the character of the *bruit* and pulsating tumour, and other points, for the purpose of forming an opinion as to the pathological cause of the affection in any given case. Having discussed the means of treatment, and given the statistical results, the author showed that the symptoms might return in three different ways; that loss of vision might occur in cases treated by any method, or not treated at all, the result depending chiefly on the degree of interference with the circulation by the formation of coagula before anastomosing channels could be established. The conclusions as to treatment were the following:—1. Belladonna, digitalis, veratrum, and ice were worthy of a trial; 2. Digital compression should always be essayed; 3. Instrumental compression was more difficult, and more likely to injure important nerves; 4. Galvano-puncture was not well suited for application to a thin-walled vein; 5. Coagulating fluids were adapted only for cases of arterio-venous aneurisms; 6. Ligature of the carotid was the remedy most generally applicable, but should not be hastily employed. The author expressed his obligations to Mr. Holmes for his interest in the case and supply of valuable information.

THE DISCUSSION AT THE PATHOLOGICAL SOCIETY.

The following is an abstract of the paper with which Dr. Bastian opened the discussion entitled

THE GERM-THEORY OF DISEASE; BEING A DISCUSSION OF THE RELATION OF BACTERIA AND ALLIED ORGANISMS TO THE VIRULENT INFLAMMATIONS AND TO THE SPECIFIC CONTAGIOUS FEVERS.

The analogy between zymotic processes and fermentations is one which has been long recognised, though the "germ-theory of disease" in its present form is a doctrine of modern growth. It has been based on the supposed resemblance between the two sets of processes. *Contagia* seem to be considered as allied to, if not identical with, *ferments*; and hence, after the promulgation of the vital or germ-theory of fermentation by M. Pasteur, which was founded upon the belief that all the ferments were bacteria, torulæ, or allied organisms, it became an easy step to imagine, and even adopt, the notion that all contagia might also be similar low independent organisms.

Recognising the vast importance of such a doctrine for medical science, the writer was induced to undertake a series of researches in order to test the validity of Pasteur's underlying doctrine of fermentation. Its general acceptance would almost of necessity have entailed most important modifications in our notions as to the true pathology, and consequently as to the treatment, of the most important diseases to which the human race is liable. As a result of these researches, the truth of Pasteur's exclusive theory has been challenged in favour of broader physico-chemical doctrines of fermentation; and the whole question is now (as the writer supposes), in the opinion of the most impartial critics, to be regarded as still *sub judice*.

In the interval, therefore, we may look into the truth of the germ theory of disease from an independent point of view.

The principal foundations of this theory seem to be of a theoretical nature. It is contended, with a considerable show of reason, that the multiplication of contagium within the body of the infected person is a process which can only be compared to organic growth and multiplication. There are, however, other means of accounting for the increase of contagion within the body, which will hereafter be more fully explained.

In addition to the germ-theory of disease in the most generally accepted sense of the term, there is a rival doctrine advocated by Dr. Beale which will be briefly referred to.

Applicability of the germ-theory to virulent inflammations and their sequelæ: (gonorrhœa, purulent opthithalmia, diphtheria, erysipelas, hospital gangrene, pyæmia, septicæmia, &c.)

The notion that bacteria have a causal connection with the process of infection in these diseases having been stated, and its origin explained, an opposite doctrine is then enounced—viz., that instead of being themselves the infective agents, or "carriers of infection," bacteria and their allies when met with in diseased fluids and tissues are for the most part actual pathological products engendered within the body. There is, in fact, the writer contends, a bacterial degeneration, which, though not so common and widespread in its occurrence, may claim to rank side by side with fatty degeneration.

The facts and arguments in favour of these respective views are then briefly summarised.

It is true that some of the considerations advanced in support of the latter doctrine may be explained by the hypothesis that all the tissues of man and higher animals are densely interpenetrated by undeveloped and indistinguishable germs of the lowest organisms. This hypothesis is held by Dr. Beale, but it may be met, and so far as it appears to be an answer to the writer's doctrine, set aside by evidence of the most convincing nature.

But the notion (1) that germs of bacteria and allied organisms pre-exist (in some obscure way) within the tissues, (2) the notion that they enter from without and are habitually very numerously distributed throughout the tissues of the body, or (3) that they are very numerously engendered by a process of degeneration taking place within tissue elements, all seem equally opposed to the views of Professor Lister, and inimical to the theoretical basis on which he has allowed his antiseptic system of treatment to rest, however admirable this system may be in itself.

Applicability of the germ-theory to artificial tuberculosis, syphilis, typhoid, typhus, relapsing fever, cholera, measles, scarlatina, small-pox, and other contagious fevers.

Although no real boundary line exists between the diseases considered in this section and those referred to in the last, the adoption of some such division is a matter of convenience in regard to the present discussion.

Many of the facts and considerations previously advanced in support of the writer's doctrine as to the relation of bacteria and allied organisms to the latter class of diseases are also applicable in regard to the present series. No positive facts of much weight seem to be forthcoming in favour of the germ theory as applied to contagious fevers. Although these affections have always been regarded as "blood diseases," in only one of them does it appear that independent living organisms are to be met with in the blood of affected individuals at any stage of the disease. There is, therefore, here a *primâ facie* inherent weakness in the whole theory, which a more thorough examination tends rather to confirm than dissipate.

The facts and considerations which may be opposed to the existence of any causal relationship between bacteria and allied organisms and the specific contagious fevers are then briefly enumerated.

After some statements and explanations concerning the occurrence of organisms in the blood of relapsing fever patients, and in connection with diseased tissues in ovine small-pox and typhoid fever, as revealed by the researches of Dr. Klein, the writer will make some brief concluding statements concerning (1) Pasteur's recent important modifications of his germ-theory of fermentation; (2) upon the degree of relationship existing between zymosis and fermentation; and (3) as to the probable mode of action of ferments and contagia.

IN THE LABORATORY.

CRYSTALLIZED ACETATE OF AMMONIA.

M. Berthelot (*Journal de Pharmacie et de Chimie* and *Pharmaceutical Journal*) describes the preparation of this salt, which he believes has not previously been obtained pure in an isolated state; the crystalline substance sold in commerce under that name being ordinarily an acid salt analogous to the binacetate of potash formerly met with, and containing acetimide when it has been prepared with heat. M. Berthelot says that the true acetate of ammonia may be obtained in the solid state by evaporating the solution in presence of excess of ammonia, and finishing the operation at a low temperature. He dissolves glacial acetic acid in caustic ammonia in a cooled retort, taking care to add sufficient water to prevent crystallization during the saturation, which would give an imperfect product. The mixture is then evaporated in a water-bath in a current of dry ammoniacal gas until the liquid solidifies upon cooling. It is then introduced into a large capsule which is placed under a large bell glass with caustic lime, and a considerable quantity of gaseous ammonia is injected under the glass. After an interval of several days, the bell glass is removed, the crystalline mass is coarsely broken up so as to facilitate the penetration of the ammonia vapour, and the capsule is replaced over the lime with more gaseous ammonia. The operation is slow and requires several months to complete it, but the author states that he has thus prepared by it some hundreds of grammes of perfectly pure acetate of ammonia.

RED MARKING INK.

M. Wegler describes (*Pharm. Zeit. f. Russland*) a red ink that can be used for marking linen with an ordinary pen. It is prepared by beating up the white of an egg with its volume of water, straining it through fine linen, and then mixing with it some finely powdered vermilion. When the writing is dry a hot iron is passed over the back of the fabric, which coagulates the albumen, and fixes the vermilion in the tissue so that it is not removed by soap, acids, or alkalies.—*Pharmaceutical Journal.*

REDUCED IRON.

M. Carles (*Journal de Chimie et de Pharmacie*) finds, as the result of some experiments he has made, that the reduced irons of commerce are very impure, and hence unsuitable for making medicinal preparations. He thinks it would be better to replace them by soluble ferruginous preparations, which can be obtained in a purer state, and are, moreover, more easily absorbed into the system. M. Carles has proved that all the reduced or pulverised irons not only contain oxide, but sulphur, and sometimes even phosphorus and silica, which, when they are acted on by the acids of the stomach, give rise to very disagreeable eructations.

SYRUPUS FERRI IODIDI.

In the *Pharmaceutical Journal* Mr. W. A. Shenstone calls attention to the fact that lead iodide is frequently found in syrup of iodide of lead. Mr. Shenstone says that the source of the lead appears to vary. Sometimes it has been found to be due to the use of impure iron filings; in other cases the iodine has been contaminated with lead through being sublimed in leaden chambers. In other cases Mr. Shenstone believes the lead was introduced from the enamel of the vessels employed in the process, and he suggests that in future the use of enamelled vessels should be avoided in preparing the syrup of iodide of iron. There are thus three ready means by which lead iodide may get into syrup of iodide of iron. Up to the present, however, only one method of getting it out again has been proposed—viz., diluting and decomposing the lead iodide with sulphuretted hydrogen. Mr. Shenstone says:—

"It seems to me that the necessary reconcentration, either by addition of more iron iodide and sugar, or by other means, is a considerable disadvantage, and I have thought it might be avoided by passing the gas into the undiluted syrup kept hot by a water-bath, removing the lead sulphide by subsidence or straining, chasing out excess of sulphuretted hydrogen by a current of carbonic acid gas, and finally warming the syrup with a few fragments of iron wire to remove any hydriodic acid that may remain.

OLEATE OF MERCURY.

Much difficulty has been experienced in the preparation of this mercurial compound. According to a writer in the *Detroit Review* this has arisen from the erroneous idea that the application of heat is necessary to effect the union of the constituents, whereas the fact is that the application of heat deteriorates the product, causing a reduction of the metal, with the formation of un unsightly greyish-black deposit. In preparing this substance the red oxide of mercury is preferable to the yellow oxide. The *Detroit Review* gives the following formula for preparing the oleate :—

℞ Red oxide of mercury in fine powder, ℥vj. ;
Oleic acid, purified, Oj.

The oxide is to be mixed with the acid in the cold, and the mixture stirred occasionally till a clear solution is obtained. The product must be kept in well-stoppered bottles and protected from the light.

ARSENICAL WALL-PAPERS.

Much has been written on this subject, but much remains to be written and much more to be done before a common source of chronic arsenical poisoning is removed.

In the last number of the *Glasgow Medical Journal* Mr. J. M'Farlane, of St. Andrews, writes on this subject. He says that the "authenticated cases of poisoning by arsenical preparations used for decorative purposes are so numerous that it is surprising to find opposition still offered, chiefly, however, by manufacturers and other interested parties, to the statements and observations made by the most trustworthy and competent authorities, confirmatory of their noxious effects." He says that it is quite certain that gaseous products containing arsenic are evolved from wall-papers containing arsenic in some form or other, inasmuch as in damp rooms—especially sleeping apartments—an alliaceous odour is generally perceptible, produced by the action of moisture on the arsenic, and "such organic matter as may be present in the atmosphere of the room from the exhalations of its occupants, or in the paper itself."

The fact that arsenical compounds have been detected in the dust and sweepings of a room papered with arsenical wall-paper shows that arsenical compounds are likely to be present in the atmosphere of such a room in a quantity sufficient to give cause for alarm. It might be urged that substances so insoluble as some of the salts of arsenic, arsenite of copper, for instance, cannot be poisonous in minute dust. Mr. M'Farlane disposes of this objection by replying that many equally insoluble substances, *e.g.*, calomel, have extremely active properties. The case is, however, hardly analogous. Be this as it may, the subject is of great importance, and deserves careful consideration. We believe that, if traced out, many hitherto inexplicable cases of illness would be found to be due to this cause.

An accurate method of testing for arsenic on paper and paper-hanging, is given by H. Hager in *Dingler's Polytechnisches Journal*, vol. ccv., No. 5, and *Pharmac. Centralhalle*, xiii., 195. The paper is saturated with a solution of sodium nitrate, ignited, treated with potash, and filtered. The filtrate is acidulated with sulphuric acid, treated with a slight excess of permanganate, and filtered again ; after adding more sulphuric acid and cooling, a piece of pure zinc is added, and the flask closed by means of a cork with two holes in it covered by two pieces of parchment-paper saturated with solutions of silver nitrate and lead acetate respectively. If any arsenic be present a black stain, consisting of metallic silver, will be formed on the silver paper ; the lead-paper serves as a check for the presence of sulphuretted hydrogen, which would, of course, turn the silver paper black and thus render the test nugatory.

For ordinary purposes, however, where great accuracy is not required, but only a rough test needed, perhaps the simplest test is the best, viz., to burn a piece of the paper suspected to contain arsenical compounds : if any arsenic be present it will be at once detected by its garlic-like odour whilst undergoing combustion.

CORRESPONDENCE.

BRANDY AND PORT.

TO THE EDITOR OF THE DOCTOR.

Sir,—In a recent number of your journal Dr. Lucas is reported to have said "to administer brandy or port is to give we know not what." Will you kindly permit me to quote the following from "The Commercial Handbook of Chemical Analysis," just published by Lockwood and Co. (1875), which will throw some light on the composition of those precious remedies, so often recommended to unfortunate persons when suffering from any real (or fancied) ailment ? That cures are not effected need scarcely occasion surprise when brandy (or wine, as the case may be) is ordered and the peculiar compound here spoken of is the only substitute obtainable :—

"*Public-house Brandy.*—Mr. Griffin states that he found in a sample which he analysed a quantity of tannin so large as to become almost like ink when mixed with a salt of iron. It was evidently not a distilled spirit ; and he says he was puzzled by it till he read the following instructions for manufacturing Cognac : Acetic ether ¾lb.; spirit of nitric ether ½lb.; French wine 8 quarts ; oak bark ½ quart ; purified spirit so much as to bring the whole to 150 quarts. This mixture, after long cellaring, is very similar to real Cognac in taste and odour. Here we have a tincture of oak bark mixed with a couple of ethers, commonly used as physic, passed off as Cognac. Mr. Griffin states that he analysed a bottle of brandy from a large grocer and wine merchant. It contained common spirit (which tasted very powerfully of fusel-oil), a quantity of this oak-bark liquor, and an abundance of sugar." What a nice cholera mixture !

Here is the recipe for "port" wine, so much lauded for its value to weakly persons : "To manufacture port wine, put into a cask, previously sulphurized, 12 gallons of strong port, 6 gallons of rectified spirit ; 3 gallons of Cognac brandy ; 42 gallons rough cyder." This produces *sixty-three* gallons of "fine old port." Another receipt is almost comical, were it not for the mischief it causes to those who are deluded into the belief that it is a useful article of "diet" : "45 gallons of cyder ; 6 gallons of brandy ; 8 gallons of port wine ; 4 gallons of sloes—stewed into two gallons of water, and the liquor pressed off ; " total, 63 gallons of *strengthening* "port wine."

I am Sir, &c.,

A Total Abstainer.

58 Poland Street, April 21, 1874.

NOTES, NEWS, AND GOSSIP.

FALSE JOINTS.

At a recent meeting of the New York Pathological Society Dr. L. A. Sayre exhibited the elbow of a noted Ethiopian comedian who had lately died. Four false joints were found, due to the fracture of the olecranon process and condyles. This explained his power of executing certain movements for which he was famous. The shortening of the arm was two and a half inches. On examining the arm the biceps muscle was found to be normal, but the brachialis anticus was found to be attached to the capsule of the joint.

Dr. Sayre had detected the false joint during life.

CHEMICAL NOMENCLATURE.

Our chemical readers (says the *Philadelphia Medical Reporter*) will doubtless be pleased to learn that a series of acids have been investigated by M. Hayduck. One is orthoamidotoluenesulphonic acid, and another, diazorthoamidoparatoluene sulphonic acid. A knowledge of these is not indispensable to the practice of medicine. The action of tin and hydrochloric acid on nitrobromacetanilide gives rise to the hydrochloride of ethenylbromophenylenediamine.

SPURIOUS SENNA.

At a recent meeting of the Pharmaceutical Society, Mr. E. M. Holmes stated that a drug had lately been offered for sale in London, under the name of "fine senna," which evidently differed considerably in botanical characters from the true article, although in size and colour somewhat resembling the Tinnevelly variety. He was informed that two bales only were in London, although an enormous quantity was consigned to the agent here, and would probably arrive before long in this country. He examined the few leaves and pod that were first received, and found that they were evidently the produce of a leguminous plant, possibly belonging to the genus *Cassia*, but certainly to a different section than that to which the officinal senna belongs.

STRAMONIUM IN HYDROPHOBIA.

Chinese medical specialists are reported to cure hydrophobia by means of poisonous doses of stramonium. If given in sufficient quantity, the efficacy of this drug in cutting short the disease is undoubted.—*New Remedies*, January, 1875.

SCIATICA CURED WITHOUT MEDICINE.

Dr. I. Pretz (*Wiener Medizinische Presse*) gives as his personal experience the following facts :—Having an attack of sciatica for six months, he tried all the ordinary remedies, with no avail. Observing that his attacks were slighter after eating, he determined to eat as often as the pain recurred. This was often twelve times in twenty-four hours. He constantly improved under this treatment, and in about two months entirely recovered. Two other cases were afterwards treated with similar results. He accounts for the result by the development of heat from the food and drink.—*Philadelphia Medical Times.*

During the last twenty years the number of patent medicine manufacturers in the United States has increased from 59 to more than 400.

The Italian Government will this year distribute 5,000 plants of the *Eucalyptus globulus* for cultivation in the districts where malaria prevails.

Did you ever hear of the man who, being required by his physician to take two blue pills "in some convenient vehicle," sat down in his wheelbarrow to swallow the pellets, as he didn't keep a carriage ?—*The Druggist.*

Dr. M. H. Jordan relates in the *American Practitioner* another case of chloroform narcosis happily resuscitated by Nélaton's method. The chloroform was given for the extraction of a tooth.

Dr. William H. Mixon records (*American Practitioner*) a case in which, having no other instrument at hand, he tapped the bladder above the pubes with a bistoury. The patient made a good recovery.

Dr. A. H. Thompson, in the *Dental Cosmos*, suggests that as our teeth continue to deteriorate in the present day, it is probable on the Darwinian theory that future generations will not have any teeth developed in their jaws, as being quite superfluous when the manufacture of artificial teeth shall have reached perfection.

It is a sad thing for husband and wife to hold discrepant medical views. A Detroit policeman reports that he noticed on his beat a house with two broken windows. He looked through one of them, and saw a man on the floor with a broken and bound-up head, while furniture and fragments were heaped about him. Inquiring as to the origin of the ruin, he was answered by a woman with a baby in her lap : "You see that man there ? Well, he's my husband. Baby's sick. He said, 'give her castor ile.' I said, 'Give her goose grease.' There he lays !".—*Phil. Med. and Surg. Reporter.*

In the *Glasgow Medical Journal* are related three interesting cases, under the care of Prof. Gairdner, illustrative of disordered respiration from thoracic aneurism and other causes. These cases are too important to abbreviate.

We may signalise in the same journal an article by Dr. Maccall on "Laryngismus Stridulus."

Entire absence of the pancreas was recently found in the post-mortem examination of M. de Morny, a well-known personage in Paris. Although complete transformation of this organ by fatty depositions or as the result of inflammatory action is not an extremely infrequent occurrence, its entire absence has been very seldom observed.—*Allge. Wien. Med. Zeit.*, Jan. 5th, 1875, and *The Clinic*, Feb. 13th.

At a recent meeting of the Medical Microscopical Society, Dr. W. B. Woodman described what he terms a "natural method of mounting microscopic specimens." This consists in putting up urinary deposits, sputa, &c., in their mother liquor with or without the addition of a few drops of a concentrated solution of crystallised carbolic acid, and then thoroughly cementing round the edge of the cover glass with any good cement.

At the same meeting Mr. J. Needham described a method which he had adopted for marking specimens in preservative or hardening solutions This is by the use of glass beads of different colours—black representing No. 1, green No. 5, &c.

OBITUARY.

Archer.—On the 5th April, Francis Archer, M.R.C.S.E., of Crcaby, Liverpool, aged 71.

Barkway.—On the 2nd April, at Lavenham, R. E. E. Barkway, M.R.C.S.E., of Bungay, aged 42.

Best.—On the 25th March, at Hyères, France, Alexander Vans Best, F.R.C.S.E., late Surgeon Bengal Army.

Brown.—On the 5th April, at Weston, Jos. Brown, M.R.C.S.E., L.S.A., of Stourport, Worcestershire, aged 54.

Cox.—On the 16th April, W. H. Cox, M.R.C.S.E., of Burlington House, Oxford Road, Manchester, aged 58.

Dicken.—On the 12th April, at Ashby-de-la-Zouch (after a short illness), Perry Dicken, M.D., in his 64th year.

Dickson.—On the 30th March, Thos. Dickson, F.R.C.S.E., F.R.C.S.Ed., of Buxton, aged 70.

Fryer.—On the 27th March, Thos. Fryer, M.R.C.S.E., of Trowbridge, aged 79.

Gray.—On the 8th April, at Bath, Sir John Gray, M.D., M.P., aged 60.

Horn.—On the 12th April, at Dalton-in-Furness, Wm. Horn, L.F.P. & S. Glas., L.S.A.L., aged 37.

Humphrey.—On the 10th April, Alex. M. Humphrey, M.B., of Balmoral Place, Aberdeen.

Kirkman.—On the 18th March, at Chicago, Dr. John Kirkman, formerly of Bolton, Lancashire, aged 64.

McSwinney.—On the 1st April, at Shop Street, Galway, James McSwinney, L.A.H.D., aged 64.

M'Millan.—On the 5th April, Alex. M'Millan, L.R.C.S.Ed., of Whithorn, Wigtonshire, aged 83.

Nicol.—On the 12th April, John Nicol, M.D., of Ardmarnoch, Argyllshire, aged 84.

Norman.—On the 22nd March, of yellow fever, at Rio de Janeiro, Hugh Norman, L.K.Q.C.P.I., &c., surgeon s.s. *Memnon*, aged 28.

Norris-Cane.—On the 10th April, at Mullinavat, the infant son of Dr. J. B. Norris-Cane.

Parkes.—On the 7th April, at Abingdon, Henry M. Parkes, M.R.C.S.E., aged 32.

Powell.—On the 30th March, at Trinity Square, Southwark, W. E. Powell, L.F.P.S.

Power.—On the 10th April, Robert Francis Power, M.D., of Montagu Street, Montague Square, London.

Provis.—On the 6th April, Wilton Provis, L.R.C.P.Ed., of Mere, Wilts, aged 28.

Richards.—On the 76th April, at Redruth, William Joseph Richards, M.R.C.S., aged 31.

Sayers.—On the 20th April, at 16 Claremont Place, Dublin, James Brydges Sayers, M.D., formerly of Limerick, aged 83.

Sawyer.—On the 12th April, at Albert Lodge, Stillorgan Road, Donnybrook, James Hewett Sawyer, M.D., late Professor of Midwifery, Royal College of Surgeons, Ireland, and one of the Masters of the Coombe Hospital.

Scully.—On the 5th April, at Main Street, Clonmel, co. Tipperary, Matthew Scully, L.A.H.D.

Southam.—On the 1st April, G. T. M. Southam, M.B., of Peterborough, aged 35.

Stewart.—On the 6th April, at the Belfast District Hospital for the Insane, Robert Stewart, M.D., Resident Physician, aged 71.

Thompson.—On the 8th March, Henry Thompson, M.D., F.R.C.S.I., late Surgeon to the Tyrone County Infirmary, aged 63.

Tyndall.—On the 17th April, at the Lodge, Gorey, co. Wexford, of acute bronchitis, John Tyndall, M.D., M.R.C.S.E., Member of the Royal Historical and Archæological Society of Ireland, aged 67.

Walker.—On the 16th April, Benj. Walker, M.R.C.S.E., of Queen's Road, Chelsea, aged 61.

NOTICES.

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THE DOCTOR.

LONDON, JUNE 1, 1875.

Multum in parvo.

THE GERM THEORY.

THE debate at the Pathological Society of London alluded to in our last has come to an untimely end, and although it may be admitted that some new arguments have been advanced, we are as far as ever from a solution of the problems involved. Dr. Bastian may indeed think he has had an easy triumph; but then a discussion on the germ theory cannot be considered complete when such men as Beale, Lister, and Simon were not present. Had they spoken, Dr. Bastian's reply must have been very different. Even as it was, it might have been more effective. Dr. Sanderson had said so little that it seemed quite fair for him to be twitted with not supporting a theory he seems to favour. He curtly disagreed with Beale, and was in turn as curtly dismissed. We scarcely understand his position, unless it be one of expectancy pending further experiments.

Dr. Maclagan in his brilliant speech advanced the theory that the special contagious organism of a specific disease requires a special nidus for its development. This is what might be expected of a parasite. Again, Dr. Murchison in the course of a very able speech put forward the argument in favour of a chemical contagium, that certain inorganic substances, for example, arsenic, by whatever channel they may gain access to the system, show a special predilection for certain tissues. Neither of these theories received the attention they deserve from Dr. Bastian, and we are therefore the less surprised at the little importance he assigned to the somewhat contradictory experiments brought forward by other speakers, and Dr. Payne's remarks on the view held by Cohn, that forms of bacteria in association with putrefaction may be distinct from those essential to septic processes.

All these points were, in our opinion, worthy of more attention, and assuredly the different results of searches after organisms by different investigators are of considerable interest, and prove the need of further investigations. Thus, Mr. Wagstaffe stated that during the two years he has been occupied with these researches he has found organisms in open wounds, in the blood of suppurative fever, strumous disease, and acute syphilis, in the pus and blood in pyæmia, and in a case of surgical fever after amputation. He did not find them constantly present. Moreover, he could not detect them in any case of joint suppuration.

On the other hand, Drs. Goodhart and Moxon, who have been working in the same direction, are unable to support Mr. Wagstaffe. They found, indeed, an excessive amount of granular matter in the blood of febrile patients compared to that of healthy persons; but they did not venture to call what they saw bacteria, for they met with no moving particles, no rod-like particles, but only beaded chains, spheroids, and granules. They did, however, find moving bacteria in chains and rods in the discharges of stumps and sores, and also in closed abscesses in pyæmic cases.

The contradictory results obtained by these three gentlemen very aptly illustrates the need of further researches. We can scarcely be surprised that Dr. Bastian questioned whether the "organisms" described by Mr. Wagstaffe were entitled to that appellation, and his position that we meet with granular particles everywhere which may have sometimes been called micrococci or microzymes was a strong one. We sympathise, too, with his objection to the use of these words. Drs. Goodhart and Moxon appear to have been prudently cautious as to admitting any mere granular aggregations to the dignity of moving organisms, and we heartily wish that the discrepancies that cropped out in this debate may lead to some general understanding as to the use of terms. It might be well to more rigidly define what we are to understand by the words bacteria, micrococci, and microzymes.

CHRONICLE.

SIR JAMES PAGET ON GOUT.

IN some clinical lectures at St. Bartholomew's Hospital, delivered during the month, Sir James Paget said that gout was perhaps more commonly than any other disease derived from inheritance. It is certainly, he said, rare for the offspring of well-marked gouty parentage to pass the middle or elder time of life without manifesting some degree of the gouty constitution, either in the form of well-marked gout or in some of the anomalous or incomplete varieties often seen in surgery. It might be taken as a general rule that all hereditary diseases would tend to decrease in intensity by inheritance. Gout was greatly modified when mingled with other constitutions, such as the scrofulous, tuberculous, or cancerous. An injury of any kind might, as the expression was, bring out gout. If a person on the point of being attacked with gout struck his foot, it was almost certain that the foot would be the part in which the gout would appear; if he wrenched his wrist, the attack would come on in the wrist. Chronic rheumatic arthritis also was commonly produced in a joint by injury. Gout might modify all common inflammatory processes: for instance, all are familiar with such terms as gouty bronchitis, gouty periostitis, or inflammation of the sclerotic or iris. It might be taken as a rule in practice that if a patient in middle or more advanced age did not recover in the usual time, according to the intensity of the lesion, and if the part remained specially painful, particularly if the pains were very severe, or if there were abiding stiffness or unreadiness to move, gout should be suspected, and the general treatment for chronic gout be adopted. A gouty inflammation in a man who also had scrofula by inheritance might drift into true scrofulous inflammation. Such cases began as unquestionable and well-developed gout; but week after week would pass, and although the intensity of the gouty inflammation might subside, still the part remained hot, swollen, tender, and unfit for use; especially it remained tender and œdematous, and at length the affection proved well-marked scrofula. Instead of the douching, shampooing, and exercise, that were right if the case were one of gout, the limb should now be restrained with splints, and kept free from disturbance. As to the influence of gout on gonorrhœa and syphilis, it was well known that there was a great number of cases in which those who had gonorrhœa were very apt to have, at the same time, inflammations of the joints and sclerotic. Certainly a considerable proportion of that cluster of diseases was due to gouty inheritance. He had known three members of a family, each of whom had had gonorrhœa, and each had inflammations of the joints and sclerotitis. As to syphilis, when inoculated on a person with tendency to scrofula or tuberculosis, it would produce a very different series of events from that which it would in a healthy person, or in one who was gouty. This subject—namely, the great varieties produced in the series of syphilitic affections by the peculiar constitution of the person inoculated, seems to have been too little studied in the general pathology of the disease. It might, for instance, be doubted whether syphilis implanted in any other than a tuberculous or scrofulous person would ever produce destructive ulceration of the soft parts of the nose. That form of syphilis was almost certainly the syphilis implanted in a tuberculous person.

SIR JAMES PAGET ON SYPHILIS.

Sir James Paget thinks that there certainly is a group of cases characteristic of syphilis implanted in the gouty. Some of this group were among cases of syphilitic periostitis. He would not say that that extremely painful form of syphilitic periostitis belonged to any special constitution of the person in whom it was found; but it seemed certain that chronic synovitis, which was associated with tertiary syphilis, was, in the majority of cases, to be found in the gouty. So, too, a large proportion of the syphilitic psoriasis of the tongue was to be found in gouty cases; and the same was true of a considerable proportion of the later tertiary eruptions. The extreme diversity in the phenomena attending what was called tertiary syphilis was an interesting subject for study. How was it that in the later stages of the affection one person had a perforating ulcer of the septum nasi, another rupial sores, another chronic synovial inflammation of the joints, another a peculiar psoriasis of the tongue? Doubtless all these might have been derived from syphilis; but the syphilis had, in every instance, been planted in a different constitution, or, at least, in a different personal condition. Syphilis inoculated in a person with a tendency to scrofula or tuberculosis would produce a very different series of events from that which the same poison would produce in a person previously healthy, or, again, in one who was gouty. This subject—namely, the great varieties that were produced in the series of syphilitic affections by the peculiar constitution of the person inoculated, seemed to have been too little studied in the general pathology of the disease. It might, for instance, be doubted whether syphilis implanted in any other than a tuberculous or scrofulous person would ever produce destructive ulceration of the soft parts of the nose. That form of syphilis was almost certainly the syphilis implanted in the tuberculous diathesis. In the later stages the forms that syphilitic disease assumed depended almost as much upon the constitution of the person affected as upon the original nature of the poison itself. An important point in the treatment of syphilis was associated with this fact. It was often said that mercury and iodide of potassium were uncertain in their effects upon syphilis; and this was true, if they were given without any consideration of the constitution of the patient. Large doses and long courses of mercury would do a tuberculous or scrofulous person more harm than would result from leaving his syphilis altogether without treatment. But, to speak only of the gouty diathesis as mingled with syphilis, it was necessary in the treatment of every gouty syphilitic person to consider his gout as well as his syphilis. Iodide of potassium should be prescribed largely diluted with any of the alkaline waters useful in gout. Small doses would, when given in this way, do more good than much larger doses prescribed alone. The physicians of Aix-la-Chapelle, Wiesbaden, and other health-resorts on the Continent had gained a great reputation for the cure of syphilis in the later stages. Their treatment consisted in the employment of mercurial inunction combined with the use of baths and drinking of large quantities of alkaline and other sulphurous waters. Much of their success depended, no doubt, on the fact that their treatment was beneficial not only to the syphilis, but also to the general constitution of the patient.

NÆVI.

In the *Lancet*, Mr. S. J. Knott gives an account of forty cases of nævi which he treated successfully by electrolysis. He employs Stohrer's and Meyer and Meltzer's continuous batteries. In general he uses six or eight cells, but the number varies according to the size of the nævus. He says that if the nævus is but small he uses one or two needles, attached to the negative pole, and one to the positive, and passes them into the tumour; if large, he puts several needles in the negative cord, and uses charcoal point with the positive. After the needles have been in the tumour a short time decomposition begins to take place, shown by bubbles of gas passing by the side of the needles. A clot is then formed, the tumour becomes bluish-white, and "in this clot fibrous degeneration takes place, and ultimate cure is the result."

Mr. Knott says:—

"The advantages of the galvanism are its certainty of action, its safety, the faintness of the cicatrix, and the cessation of pain directly the operation is over. I have used every other method, and I certainly think this by far the best."

TINNITUS AURIUM.

At a meeting of the Harveian Society (April 5th) Mr. George Field related fifteen successful cases of severe noises in the ear, treated by him by galvanism at St. Mary's Hospital, all of which had failed to get relief from other modes of treatment. He used Dr. Stohrer's double-celled induction apparatus, applying the galvanism directly to the membrana tympani by means of a probe passed through an ear speculum, made for the purpose by Messrs. Krohne and Sesemann. A piece of platinum wire was fixed to the speculum, and by this the current was carried to the tympanic membrane. Most of these patients had great con-cavity of the membrana tympani, with more or less deafness and obstruction of the Eustachian tubes. Some of them had suffered from noises in the ears for many years, and the sounds described by them were various. The "tinnitus" in some cases was almost unbearable before this mode of treatment was adopted. Mr. Field maintained, that galvanism no doubt stimulates the intrinsic muscles of the ear, and therefore enables them to perform their proper function. He said he had reason to believe that the stapes often remains fixed within the foramen ovale in these cases of singing in the ears. Such a condition doubtless does, from the continued contact of the stapes with the internal ear, induce a constant formation of false sounds. The partial withdrawal of the stapes effected by contraction of the stapedius muscle, would be followed by a reduction in, or a temporary removal of, such false sound. And he would, therefore, suggest, that if this stimulation be carried on perseveringly, the muscles may regain their tone and exert their proper influence in the auditory function.

A PATHOGNOMONIC SYMPTOM OF THE MORIBUND CONDITION.

DR. JOHN SHRADY, in the *New York Med. Record*, maintains that the earliest, and therefore most valuable symptom of approaching death is the up and down movement of the trachea; that the inferior laryngeal nerve, owing to a partial paralysis, or impairment of its function, is concerned in the production of this phenomenon, and sounds the first note of alarm that the medulla oblongata is invaded.

This tracheal symptom is particularly prominent in fatal cases of uræmic convulsions, opium poisoning, apoplexy, and delirium tremens; the air then ceases to stimulate the glottis, the respiratory movements are impaired, and the lungs can no longer decarbonise the blood.

In pneumonia this symptom is of especial value, anticipating as it does alarming changes in pulse and temperature; while in phthisis, Dr. S. has known it to be a precursor of death three weeks in advance. Its presence or absence in membranous croup should be, in his opinion, an important element in the prognosis of a given case of tracheotomy.

PHOSPHORATED COD-OIL IN PHTHISIS.

DR. THOROWGOOD (*Lancet*, April 24) mentions the case of a young man, aged 20, with cough, attended by copious yellow expectoration, often mixed with blood, pulse 100, tongue white, and with pallor and emaciation. Left chest resonant, respiration full and strong. Right apex had impaired resonance, bronchial breathing and bronchophony; crepitant râle at supra-spinous fossa. He was ordered to take two drachms of Savory and Moore's phosphorated cod-liver oil thrice daily, which contains one-fifth of a grain of phosphorus in the ounce. He was seen in March, 1869, and then in January, 1870, having continued this prescription, and was greatly better. In June, 1871, he had hæmoptysis, when he went to Madeira. In 1874 he was nearly well. Dr. Thorowgood says that the liking for the phosphorated cod-liver oil was very marked.

DR. WILLIAMS ON THE UTERINE MUCOUS MEMBRANE.

DR. WILLIAMS (*Obstetrical Journal*) has published a paper on the "Structure of the Mucous Membrane of the Uterus and its Periodical Changes," in which he mentions the microscopical appearances of the uterus in twelve cases of persons dying at various known periods from the last menstrual epoch. Starting from the cessation of the menstrual flow, when the mucous membrane of the uterine cavity had nearly disappeared, whilst that of the cervix remained whole, he found a rapid renewal of the membrane takes place, commencing at the lower part, and becoming complete some days before the occurrence of the menstrual flow. Fatty degeneration of the membrane then ensues, before the hæmorrhage, and probably causes it, and the menstruation rapidly removes the membrane. At the end of menstruation the bundles of the muscular coat were found to form the inner wall, and mingled with the muscular fibre cells he found round granular cells, with remains of glands lined with columnar epithelium, and groups of rounded cells. The epithelium first appeared near the cervix, where it lies on a thin layer, composed of round and spindle-shaped cells, and glands imbedded in a structureless matrix.

CARDIAC EMBOLON.

DR. TILLAUX (*Le Progrès Méd.*, No. 16, 1875) mentions that he had noticed the death by syncope of a woman, aged 58, taking place forty-three days after a fracture through the malleoli. After death he found a clot filling the femoral vein from the popliteal space to the crural arch, and adhering to the entrance to the internal saphena vein. In the right ventricle, retained by the columns, he met with a clot of two centimetres, which was adapted to that of the femoral. The patient had died of cardiac embolon.

THE PERILS OF OBSTETRICIANS.

DR. CAIRNS brought a case before the Obstetrical Society of Edinburgh where a medical man caught syphilis whilst attending a gratuitous patient, and thereby lost his reputation and was shunned by his other patients. Such cases show how careful medical men should be when attending cases of labour. The use of a gutta-percha covering over the fingers of the hand used in examination is advisable, and the hand ought always to be carefully washed after the touch has been used. The majority of married women who contract syphilis from their husbands are quite unaware of the fact, and many women give birth to syphilitic children without themselves apparently much suffering in their health. These fœtuses however, may infect the practitioner.

DEATH FROM ETHER INHALATION.

UNFORTUNATELY, even ether, it seems, is not to be inhaled always with impunity. A boy, aged 16, was operated on by Dr. Hardie, of Manchester, at the Workhouse Infirmary, on the 3rd of April, 1875. Four drachms of ether were poured on a piece of lint and placed in a folded towel, which was held pretty close to his face. There was no coughing, and but little struggling. He was ready for operation in about four minutes without any more ether. The respiration suddenly ceased, and the pulse at the wrist became imperceptible. The tongue was pulled forward and the poles of a battery applied to the phrenic nerves. Cold water affusion, artificial respiration, and suspension by the feet were tried, without avail. The organs were found healthy. The cavities of the heart were empty. Probably death arose from syncope. Robbin's ether was used.

This is a most untoward event, because it may prevent the growing tendency to use ether instead of chloroform from spreading as it ought. Ether is certainly far safer, and ought therefore always to be used instead of chloroform.

INSULATION IN RHEUMATISM.

AMONGST other curious proposals may be named that of insulating the beds of patients in order to cure rheumatic fever. As a specimen of the manner in which such remedies obtain credit, we may cite a case reported by Dr. Edward Playter in the *Canada Lancet*. On Feb. 11th the patient began to suffer, getting worse until the

14th; when Dr. P. ordered a blue pill and seidlitz powder, and *put* him on a mixture containing *potassium nitrate, potassium bromide and colchicum.* On the 16th more pain; so Dr. P. ordered bed to be insulated, which was done by setting the legs of the bedstead in four glass salt-cellars, at the same time ordering *the mixtures to be continued and a Dover's powder to be taken at night.* The next day the patient was better, and soon got about again. The cure is attributed to the insulation, notwithstanding the treatment we have italicised. Had the editor of the *Lancet* an eye to a joke when he inserted Dr. P.'s case in his issue for the 1st of April ?

POLYPUS OF THE POSTERIOR NARES.

Dr. Ory (*Le Progrès Méd.*, No. 15, p. 100) asks whether fibrous polypi may be produced in the posterior nares, or are these growths transformed mucous polypi. He gives the result of the microscopic examination of two nasal polypi, seen, one at La Pitié, in 1872, and the other this year. In these cases there was clinically great difficulty in making a diagnosis. There was the same fleshy appearance and exaggerated consistence—in short, a great resemblance to naso-pharyngeal polypus. In both the pedicle of the polypus was attached about the posterior orifice of the nares. Microscopically there was found a more resistent central part and softer peripheral part, presenting in its structure all the symptoms of inflammation. Lastly, the epithelium of the pharyngeal extremity was stratified with cylindrical cells. He cites the case of a boy, aged 15, who for some eighteen months had suffered from continual yellowish discharge from the right nostril. There were symptoms of nasal polypus, and disagreeable feeling in the back of the mouth, with epistaxis, which had existed for three weeks, but no deformity of face. The velum palati was very tense, and pushed forwards. There was a tumour completely filling the posterior part of the nasal cavity, and coming to touch the vertical point of the tongue. The portion which is visible is violet, knobby, and movable, of rather soft consistence, but not so much as a mucous polypus. The exact point of the pedicle is not discoverable, but it is not adherent to the posterior wall of the pharynx. A median incision of the velum palati with galvano-cautery admits of bringing the polypus forwards into the mouth. The foot-stalk is as thick as the little finger, and the tumour was as large as a hen's egg, was of irregular form, with fibro-cartilaginous consistence within, soft above, and near the pedicle, its colour was whitish. It was removed by cautery in a month's time. The microscope showed three zones on section—the central, of lamellar connective tissue, with elastic fibres; the second zone was of connective tissue, with more numerous cells, and the superficial had an epithelium with cylindrical or quadrangular cells.

ANATOMICAL PROOFS OF TWO BRAIN CENTRES.

Professor Betz, of Kiew, observes that in the cerebral portion of the brain there are two tracts lying at the posterior extremity of the sulcus of Rolando, and separated by it; the anterior one extends as far as the internal surface of the hemisphere, the posterior is much larger. In the former he has found some peculiar cell formations. They are the largest pyramidal cells in the whole nervous system, having a breadth of 0.04 to 0.12 millimetres, and a length of from 0.04 to 0.12; they are also provided with processes, of which two are principal and from seven to fifteen accessory. One of the principal ones extends to the periphery of the cortex, the other or thinner increases in size, and is continuous with the axis cylinder. These corpuscles, called by him *giant pyramids*, are common to men, certain apes, and dogs, and are found at the points where Hitzig and others performed their experiments. They are found in groups in the anterior cortical tracts, but are sparingly distributed throughout the anterior central convolution, while they are most abundant on the internal surface of the hemisphere. Internally from the fissure of Rolando, the author describes a lobe, the lobus *para-centralis*, which he regards as a motor tract, identical in man and other animals. In man it lies concealed in the middle of the hemisphere, while in the animals it is free.

SIR GEORGE BURROWS ON MEDICAL POLICY.

We have received the address recently delivered by Sir George Burrows, President, to the Fellows of the Royal College of Physicians of London, which has been published in the form of a pamphlet. Among other topics treated of in this address is the question of professional fees. Sir George shows clearly that the present honorarium received by physicians is very inferior to that received by their predecessors in days when the purchasing power of gold was greater than it is at present. It is quite true that house-rent, carriages and horses are far more costly than in former days; and yet the fee of one guinea remains the same as it used to be. "The long-established customary fee to the physician is an honorarium," says Sir George, "and long may it continue to be so. The College has never laid down any fixed regulations as to the amount of honorarium to be expected by the consulting physician; and I would not venture to presume to advise the Fellows to deviate from that principle. But I think I have brought under your consideration many reasons why the senior and leading members of our order should endeavour to impress upon the community the reasonable expectation of physicians to be more liberally treated in the recognition of their professional services, when distance or other circumstances cause an extra demand on their time."

This is a very important subject, and will doubtless be further ventilated by the various medical papers in this country and in America. We hold that Sir G. Burrows' opinions are perfectly correct, and that probably the fee of two guineas as a first consultation fee should be demanded from persons in good circumstances.

STRANGULATION OF CANCER OF THE BREAST.

Dr. Tillaux read a report at the Société de Chirurgie of Paris on the 14th April (*Le Progrès Méd.*, No. 16, 1875) on a case of the removal of a cancer of the breast in a woman aged 84, by Dr. Perier. The pain caused by the constriction was very great during more than 24 hours. The ligature fell only on the 28th day, and cicatrisation was already complete. Dr. Perier only employed the method because he could not employ any other. The patient, who was much distressed by continual pain, asked for the operation. In the discussion which followed, Dr. Verneuil said that in foreign countries there was too much liking for this kind of operation: in England all fistulæ of the anus were treated by elastic constriction. He had operated by this method on two anal fistulæ of hardly two centimetres in length, and for 24 hours the pain was very great. The section took three days in one case, and four in the other. In one case he had almost lost his patient by renewing the ligature. In short, this procedure does not present great advantages; it is very painful, and may even be dangerous.

Dr. Desprès said he had removed an epithelioma of the tongue by the elastic ligature. The ligature, which was painful for some hours, fell at the end of eight days. This method is very applicable, he held, when it is not requisite to divide the skin, when it is very painful. Dr. Polaillon said he had wished to employ this process in a case of spina bifida of the nape of the neck which was almost pedunculated, and where the fluid only communicated with the spinal arachnoid by a very small aperture, but it was too painful.

ON NERVES CONTROLLING THE DILATATION OF VESSELS.

Professor Goltz and others have been making experiments on dogs to determine the effect on the temperature that followed the section of nerves. They found that after dividing the sciatic nerve the vessels in the affected limb underwent active dilatation, and this result occurred repeatedly in the same limb, if only section were again made of the nerve at a point nearer the periphery. As a result of these experiments, Goltz maintains (*Schmidt's Jahrb.*) that on section of a nerve the *vaso-dilator* fibres contained in it are irritated, and in consequence produce an active dilatation, which, however, exhausts itself subsequently, and is followed by a persistent contraction. He holds further that the tone of the vessels is maintained by certain nerve centres which exist in the vascular walls. These views are believed to derive support from the fact that they explain certain observed phenomena, *e.g.*, that the vessels of the abdomen dilate after division of the splanchnic nerve, hyperæmia of the eye follows section of the trigeminus, &c. The condition of irritation which is constantly observed in the sensitive nerves after section, Goltz thinks supports his hypothesis, *e.g.*, the pain in the fingers after division of the median nerve.

THE VASO-DILATATIVE ACTION OF THE GLOSSO-PHARYNGEAL NERVE ON THE MUCOUS MEMBRANE AT THE BASE OF THE TONGUE.

M. Vulpian, at a recent meeting of the Académie des Sciences, presented a note on this subject. Curarised dogs in whom artificial respiration was maintained were used for experiment.

After having exposed the glosso-pharyngeal nerve below the base of the cranium, it was tied, and then cut above the ligature, so that its peripheral extremity could be excited by electricity.

No change in the appearance of that portion of the mucous membrane of the tongue supplied by this nerve, the posterior, from the epiglottis in a V-shaped direction to the calciform papilla, was observed, excepting slight and transitory congestion. An induced current passed through the peripheral portion of the nerve caused redness of the lingual mucous membrane on the same side in the locality mentioned. This red colour was particularly intense in the neighbourhood of the anterior half-arch, and extended to the tonsil. The inferior surface of the tongue became congested at the same time, but to a less degree. The vessels of the congested parts could be seen to be enlarged, and the temperature of the mucous membrane was somewhat increased, but it was not moist. The effect of faradisation lasted some time, and could be renewed at pleasure. These results are the same as those obtained by cutting, on the same side of the same animal, the lingual nerve at its superior part, the hypoglossal and the pneumogastric close to the cranium, after having, in addition, excised the superior cervical ganglion. The same results are observed in an animal poisoned with sulphate of atropia. The mechanism of this vaso-dilating action of the glosso-pharyngeal is undoubtedly the same as that exercised by the fibres of the chorda tympani which accompany the lingual nerve to its extremities.

Further experiment showed that the vaso-dilatative fibres contained in the glosso-pharyngeal are not present in the facial.

Finally, the vessels of the mucous membrane of the tongue are everywhere under the influence of vaso-dilatative fibres. In the anterior part of the tongue it is the lingual which supplies this action by means of anastomotic fibres received from the chorda tympani; in the posterior part of this organ it is the glosso-pharyngeal by which, as has been shown, this office is performed.

CHLOROFORM ADMINISTRATION.

Professor Lewis A. Sayre, of New York, in the course of a clinical lecture, said the way he gives chloroform is this: A very few drops sprinkled on a handkerchief, and applied close to the face, without admixture with oxygen. I know this method of using chloroform for the production of anæsthesia is contrary to the teachings of all the books. I am fully aware that it is in direct antagonism to the opinion of many distinguished men; but chloroform given in this manner does the work, and, so far as my experience goes (and I administer chloroform six or eight times daily, in all classes of cases), it does the work speedily and safely.

What do you give chloroform for, except to produce anæsthesia? Oxygen is its antidote, and resists its effects. Then why do you give the antidote, which prevents you from obtaining the influence of the drug, when by giving the vapour of chloroform pure and unimpregnated with oxygen it produces its results at once, and with but the minimum quantity? Then, if by some mishap, some peculiar idiosyncrasy of your patient, respiration ceases, a few artificial respiratory movements are all that is required, and the five or ten drops instead of five or ten ounces which have been used are rapidly eliminated from the system, and the patient is rescued from impending death; but if there be a pound of the agent which has been gradually introduced into the patient's circulation, what hope have you—what hope *can* you have—that success will attend your efforts at restoration?

Chloroform is a deadly poison, as strychnia, arsenic, prussic acid, but who ever heard of their being given by the ounce or pound, in connection with their antidotes, in order to attain their effects? No; the doses of these drugs are carefully gauged, and the very same reason which prompts the physician to regulate the doses of strychnia, arsenic, and prussic acid should deter him from giving chloroform in such large and indefinite quantities.

ACTUAL CAUTERY.

Professor L. A. Sayre said in a recent lecture: Now, one point in applying the hot iron. You noticed I held it firmly, very firmly, to the knee. And why? Because an evolution of gas takes place, and unless securely held your instrument will slip from the point, and instead of having a linear eschar at the exact spot desired, as the result of your operation you will obtain a half-dozen bad burns perhaps exactly where you did not desire them.

There is but little pain attendant upon the operation. From some cause, burning with an iron at white heat is the best local anæsthetic we have, and frequenly when the operation has been performed once, and it becomes necessary to repeat it, the patient refuses an anæsthetic.

HYSTERIA AND EPILEPSY.

Dr. Bourneville (*Le Progrès Med.*, No 16, 1875,) mentions two cases of hysteria occurring in the hospital of La Salpetrière, at Paris. The first was that of Rosalie Leroux, aged 52, who entered the hospital in 1846, at the age of 23. She had been put out as a foundling in childhood, where she was very ill-treated, so that she could not walk at the age of four; she had never been at school. At the age of eleven she was terrified by meeting a dog, which was probably affected with rabies. From this time she was subject to accidents, which she called "loss of knowledge," and which lasted for eight or ten minutes, and sometimes were accompanied by falling. At the age of 16 she had a second fit of terror at the sight of the body of a woman who had been assassinated by her husband. This augmented the frequency of the losses of consciousness. At the age of 19 she was again seized with terror, being pursued by a robber whilst carrying with her the sum of 200 francs. She fell down in convulsion, and when she came to herself she was paralysed, and had contraction of the right side. She had also contraction of the muscles of the jaw. She was shortly after this sent to La Salpetrière. At one time she remained in a lethargy for three days and three nights, like dead, and not eating anything. In January 1859, she had an attack. For some days she declared that she felt out of sorts, and then suddenly fell, and cried out loudly, her limbs contracting with great force, the fingers and the fist being bent so that the fingers touched the radial border of the forearm. Her lower limbs were also strongly flexed, her knees drawn up to the mouth and the heels to the bullocks, so that she was literally rolled up like a ball. She had sudden movements, so that it required five or six persons to restrain her. She tried to bite those around her. The face was congested, the eyes wide open, haggard, fixed, and the pupils dilated. When the fingers were brought near her eyes she did not perceive them until they touched her. Anæsthesia was complete on one side, and much diminished on the other. She fell into terrible fits of fury, and tried to bite anyone who remarked upon the strange position in which she was rolled. This condition lasted several days. It was ameliorated by chloroform inhalations. This case was under the care of Dr. Charcot.

APHASIA.

Dr. Gairdner read before the Glasgow Pathological and Clinical Society on Feb. 9th the details of a case of aphasia in a married woman. Patient came into the Glasgow Infirmary on Oct. 10th, 1868, with well-marked hemiplegia and aphasia, the right side being almost completely paralysed. Sometimes she was quite inarticulate. Urine and fæces were passed in bed. On one occasion, on Nov. 13, she said, "Doctor has no seen me to-day." She died on December 6th, 1874, being then of the age of 67. Her powers of speaking became improved before her death, and she could pronounce all ordinary words, and even short sentences, with great readiness directly after hearing them. There was absence of the severe emotional excitability often associated with severe hemiplegia not connected with aphasia. The power of her right extremities slightly increased, but the arm was much atrophied, and the flexors were contracted, so that the fingers were well bent into the palm of the hand. She died from progressive enfeeblement and diarrhœa. The post-mortem examination disclosed shrinking of the left cerebral hemisphere, owing to loss of substance in its middle parts. There was a large gap in the cerebrum which contained a large quantity of fluid, and occupied the situation of a great number of convolutions. In the frontal lobe the first convolution was intact, as was also the second; but the third, or inferior frontal, was quite destroyed at its posterior part, the portion behind and above the fissure of Sylvius being entirely absent. The island of Reil was left exposed. The only part of the parietal lobe left was the posterior half of the superior parietal lobule, the ascending parietal convolution, the anterior half of the parietal lobule, and entire superior lobule, including the supra-Sylvian and angular gyri. It was thought that the destruction might have extended to the middle parts of the occipital lobe. The upper parts of the temporal lobe were destroyed, including the superior temporal convolutions, and a part of the middle temporal, nearly the whole of it.

THE DANGERS OF CHLOROFORM, ETC., AND THE NITRITE OF AMYL.

Mr. C. Bader writes to the *Lancet* that, some years ago, when nitrite of amyl was first used at Guy's Hospital, he, with Dr. Goodhart, studied its effects, when taken internally, upon the blood-vessels in the healthy optic disc and retina. The effect, he says, is as rapid as it is striking. Three or four seconds after taking three drops of the drug on sugar the blood-vessels of the retina (arteries and veins, but especially the veins) become enormously dilated and gorged with blood, leaving no doubt as to simultaneously existing cerebral hyperæmia, with greatly accelerated circulation of blood.

Lately, after observing upon himself the effects of inhalation of the vapour of the nitrite of amyl, it occurred to Mr. B. that in cases of faintness or of defective breathing or heart's action, while under the influence of an anæsthetic, nitrite of amyl might be of use. He relates three cases to show the encouraging effects of this agent.

Case 1.—Given a mixture of alcohol, ether, and chloroform. Young man, hydrocephalic, inherited syphilis; iridectomised on both eyes; suddenly became pale, deeply insensible, with pulse and respiration very defective. Lint, with a few (three) drops of nitrite of amyl, was placed over nose and mouth. In two or three seconds a deep inspiration, followed by others, flushed face, quick pulse, and return of sensibility, were observed.

Case 2.—Given chloroform. A boy, pale, fat, blue lips and cheeks, became suddenly very faint (blue lips, blood turning black, breathing very imperfect). The same quick result, with vomiting, followed the inhalation of the nitrite of amyl (three drops).

Case 3.—Given chloroform. A middle-aged woman suddenly became blue in the face and stertorous (tongue falling back). Lint, with ten drops of the nitrite of amyl, was placed over mouth and nose. In a few seconds the blueness and stertorous breathing gave way to good colour, regular breathing, and sickness and vomiting, though no food had been given for several hours.

The most striking effects of the nitrite of amyl were the quick restoration of breathing, of a good colour, and the rapid appearance of sickness. It remains to be shown whether injection of this agent will have a still better effect.

BORACIC ACID AS AN ANTISEPTIC.

In a series of articles on "Recent Improvements in the Details of Antiseptic Surgery," publishing in the *Lancet*, Prof. Lister, F.R.S., gives an interesting account of his acquaintance with boracic acid: About three years ago Dr. Stang, of Sorweg, in Norway, being on a visit to Edinburgh, informed the Professor that a new antiseptic had been discovered in Sweden, and was extensively used in that country for the preservation of articles of food, and also as an application to wounds. The "aseptin," as it was termed, was in two forms, a powder and a liquid, the latter receiving the additional title of "amykos." On returning home Dr. Stang sent samples, at the same time stating that the active principle of both the articles had been ascertained to be boracic acid, the virtues of which had been discovered by Mr. Gahn, a chemist in Upsala.

Trying them on himself, he found both the new antiseptics, when employed in the form of watery solution, highly efficient and much less irritating than carbolic acid.

Boracic acid was then little more than a chemical curiosity. But he succeeded in obtaining in Edinburgh a sufficient quantity to enable him to test its properties unmixed with other ingredients. Some striking instances of its antiseptic efficacy as well as of its therapeutic value were soon witnessed, and now the solution, as well as boracic lint and other preparations, are being extensively used.

SUBCUTANEOUS TRANSFUSION.

Dr. Landenberger, of Stuttgart, proposes to inject defibrinated blood into the subcutaneous cellular tissue, instead of into the veins, in phthisis and other chronic maladies. He has tried the plan on three animals, and says that absorption is very rapid. The small clots that form in defibrinated blood are by this method prevented from being a source of danger, as the capillaries, he says act as a filter. It may be questioned whether the term transfusion is fairly applicable to this treatment, and many will naturally object that the quantity to be thus introduced into the system could not be large.

CURE OF VESICO-VAGINAL FISTULA BY CAUSTICS.

MANY distinguished Italian and Belgian surgeons maintain that vesico-vaginal fistula may often be cured by cauterisation. Dr. L. de Lorge has brought before the Medical Society of Ghent a case which he cured by this method, and which was watched by Prof. van Wetter. Three cauterisations, on the 20th November and the 4th and 18th of December, sufficed to completely close the fistula, which was at first one centimetre in diameter. The first application was made within a month of the delivery, at which the accident was produced. Dr. de Lorge employed caustic potass, and applied it very freely all round the edges of the fistula. After the application the walls of the vagina were separated by a piece of sponge. The patient did not suffer much pain, and within two days the dribbling of urine was diminished. So the cure progressed gradually but surely.

POISONING BY ACONITE.

DR. J. E. BLAKE, in an interesting article in the *New York Med. Journ.*, relates a very important case of poisoning by aconite and chloroform liniment. An hour after the poison was taken "*no pulse could be detected even in the axilla, and she remained without any trace of pulse for a period of over three hours.*" Nevertheless, Dr. Blake persevered all day and all night with galvanism and artificial respiration, and was rewarded by complete success. He had previously, within half-an-hour of the poison being swallowed, used the stomach-pump until fluid returned unimpregnated with it; but enough had been absorbed to do deadly work. This patient became early *unconscious*, and remained so for many hours. Yet almost all writers assert that in aconite poisoning *consciousness* continues to the last. Could the chloroform account for the unusual fact? The lady had taken "a little more than a drachm" of the liniment, which consisted of chloroform and tincture of aconite root in equal quantities.

// The Doctor

METACHLORAL.

M. DUJARDIN-BEAUMETZ finds metachloral a useful substitute for iodoform as a local application. He adds that metachloral is entirely free from the disagreeable odour that makes the use of iodoform unbearable to some people.

EXPERIMENTAL RESEARCHES UPON THE MODE OF ACTION OF THE MORE COMMON EMETICS.

DR. H. CHOUPPE (*Archives de Physiol.*, No. 1, 1875) shows that ipecac and its alkaloid emetine always provoke vomiting by direct irritation of the terminal filaments of the pneumogastrics in the mucous membrane of the stomach. Tartar emetic and antimony have a double action: they may act upon the gastric mucous membrane, but also directly upon the medulla. Moreover, tartar emetic acts more quickly upon the stomach than upon the medulla; apomorphine more rapidly on the nervous centres than upon the gastric mucous membrane. The best proof of this which can be given is, that the dose of tartar emetic sufficient to cause vomiting when injected by the veins must be larger than when it is introduced by the stomach; whilst the maximum effect of apomorphine is produced by injection into the general circulation.

NASAL POLYPI.

DR. GEO. TROUP MAXWELL "guarantees" that muriated tincture of iron is a radical cure for nasal polypi. He gives an example in the *Phil. Med. Times*:—

A carpenter, whose nares were closed with gelatinoid polypi, which always produced a feeling of discomfort, and sometimes considerable pain. The distension was at times very great, and caused some disfiguration. He had used a number of astringents without effect, but had never been able to summon the courage required to submit to evulsion. Dr. M. injected about a drachm of the tincture of iron, reduced in strength one-half by admixture with water, into each nostril, holding his head back so as to retain the fluid in contact with the polyp a few seconds. This simple operation was repeated daily, and on the third day the masses began to slough and to be discharged. At the end of a week their destruction seemed to be complete; the nares were pervious, and the sense of smell was recovered.

The treatment of this case was more protracted than any he had before encountered, three or four days being sufficient hitherto. The delay in this case he attributes to the impacted condition of the nostrils, which prevented access of the tincture to any but a limited portion of the body of the polyp. As soon as the fluid gains access to the pedicle the cure is rapid, because the death of the polyp is quickly effected. In this case the injection was repeated the third or fourth time before the fluid could pass through the posterior nares into the pharynx. The irritation of the nares caused by the dilute tincture is trifling in severity, and of short duration.

Dr. Reeder first proposed this treatment in the *Chicago Medical Journ.*, Sept., 1859; and Dr. Maxwell contributed three cases to the *St. Louis Med. Reporter*, 1867.

OXYGEN IN CONGESTION OF THE BRAIN.

DR. TAMIN-DESPALLES has brought before the Paris Academy a case in which he met with a great success. The patient had cerebral congestion, with complete paralysis of the right side. Pure oxygen was inhaled. After a few inspirations the patient declared he felt better. Gradually the power of movement returned to the paralysed side. Some hours later an abundant excretion of urine occurred, and the patient was able to stand upright. Ten litres of the gas were inhaled.

TOPICS OF THE TIME.

CROUP AND DIPHTHERIA.

SINCE Sir William Jenner and others pronounced in favour of the view that croup and diphtheria are identical, the weekly papers have been full of letters on the subject, and a number of side issues have also been raised. One of these relates to French nomenclature, Dr. George Johnson having denied that the *spasmodic croup* of English is synonymous with the false croup of French authors. Sir John Rose Cormack, who had used these expressions as synonymous, at once cited the best medical dictionaries of Paris in justification of his use of the terms, and was supported by Dr. Risdon Bennett, who, in reference to the controversy as to the identity or diversity of diphtheria and the old English inflammatory disease, croup, expresses the conviction that they are distinct diseases. Dr. Bennett says he was one of the first to call attention to the outburst of diphtheria in this country, which took place about the year 1850, in which year he read before the Medical Society of London a paper (*Medical Times*, vol. i., new series, 1850) expressing his views as to the distinction between the disease described by Bretonneau and that with which English practitioners were familiar, as acute inflammatory croup. Though much more familiar now with diptheria than then, he saw no reason materially to alter the views expressed in that paper. Previously to that date the disease with which most practitioners were most familiar was an acute inflammatory disease, beginning in the air passages and amenable to strictly antiphlogistic treatment, and which Dr. Semple would call "laryngitis stridulosa." This designation is not, however, a happy or desirable one. Dr. Bennett proposes the following classification: 1, false or spurious, or bastard croup; 2, acute inflammatory croup; 3, diphtheritic croup, or diphtheritic laryngitis.

Dr. Yeo remarks that general practitioners see more of so-called croup than hospital physicians and surgeons. No doubt this is so, and, moreover, the word croup in general practice is used much more indefinitely, because of its familiarity to the public. We have even known men tell parents that their child had croup when the disease was merely spasmodic. This is certainly carrying licence too far. The public dread croup, but could very well understand that the term *false* croup meant a much less dangerous disease.

Dr. Wilks finds that most medical men apply the term croup to any acute affection where the symptoms denote a partial closure of the glottis. They cannot often know the exact nature of the malady, whether it be due to simple inflammation, or whether a membrane be present. This is a matter for after-diagnosis. They are, therefore, content to call the case one of croup, which Dr. Wilks says is as good an expression as most other terms in medicine. In regard to the modern assertion that membranous inflammation is never idiopathic, but always diphtheritic, Dr. Wilks says the question is not an anatomical one, but has to do with causes, and can only be settled by clinical observation.

Dr. Thorowgood supports the classification suggested by Dr. Risdon Bennett as simple, complete, and practical. That inflammatory croup, or membranous laryngo-tracheitis, should be placed in a distinct class from diphtheritic croup is a conviction that he cannot resist. Inflammatory croup appears to him a disorder akin to plastic bronchitis. In this disease small fibrinous casts of the bronchi are coughed up by the patient; these being fibrillar in nature, and mixed with exudation corpuscles. Rarely does this complaint extend towards the trachea, but he has met with a case of bronchitis where an adult expelled a fibrinous cast of the trachea, making a good recovery. Why some constitutions tend to fibrinous and others to purulent formations, seems a matter due to the particular nutrient tendencies of each. In diphtheria it seems as if the fibrinous part of the blood were poured out on certain mucous surfaces, somewhat as the serous element of blood is poured out in cholera; both these being specific blood diseases. The fibrin may be deposited on any part of the mucous membrane; commonly we see it first on the tonsils and velum palati, but it may be exuded into the larynx, trachea, bronchi, or intestine. A sore on the skin, made by a blister possibly, may in a diphtheritic case be covered with the peculiar exudation. Dr. Thorowgood adds: "I have before I knew better in a few instances used blisters in croup, but I never saw a membrane like diphtheria form on their surface. The occurrence of loss of vision, albuminuria, or paralysis in connection with pure inflammatory croup, is a point on which we as yet have no information."

In connection with these diverse opinions we may observe that many men have dwelt upon the likeness between scarlet fever and diphtheria. Some have said the latter is an occasional complication of the former. It was, however, reserved for Zum Sandes, of Berlin, to declare in the *Klin. Wochenschrift* that these two diseases pass readily one into the other, and are identical in nature. He says he has seen an epidemic in which scarlatina was produced by the poison of diphtheria, and *vice versâ*. The two diseases, he believes, originate in a single cause—none other than bacteria, of which we have lately heard so much. The appearance of one or other disease he puts down to differences in age, constitution, &c.

At the meeting of the Medical Society of London on April 12th, there was a discussion on the identity or non-identity of croup and diphtheria, provoked by Dr. Crisp's paper on the "non-identity" of the two diseases, in support of which he related cases taken from his own practice. In the discussion Dr. Semple, who threatens to bring his views before another society next session, traced the origin or the word croup to an old Scotch monosyllable, and stated that three diseases had been confounded under the one term—viz., 1. Membranous croup, or laryngo-tracheal diphtheria; 2. Non-membranous croup, or laryngitis stridulosa; and 3. Spasmodic croup, or laryngismus stridulus. After alluding at some length to foreign authors who had written on the subject, he mentioned the introduction of the word diphtherite or diphtherie by Bretonneau, after investigations during the epidemic at Tours in 1818, in which the French physician was ably assisted by his then pupils, Velpeau and Trousseau, in which he discovered the existence of a false membrane in the larynx and trachea, and in which he convinced himself that the disease had previously existed, and been described in Spain at the end of the sixteenth, in Italy in the seventeeth, and in France in the eighteenth century. Dr. Semple thought the word croup should be rejected entirely as including the three divisions he had before mentioned.

If we are not mistaken, we have heard all this from Dr. Semple before. It is only a question of nomenclature, and of the smallest importance. His names will never be accepted by the profession, and we cannot see the use of continually proposing them.

We must also refer our readers to the discussion that has taken place at the Clinical Society, and reported in the present number, on a case of scald of the glottis. Most diverse opinions were, it will be seen, then expressed as to the identity of croup and diphtheria.

THE PATHOLOGY OF DIPHTHERIA.

In a paper in the *American Journal of Obstetrics* for February, Dr. Jacobi, says the *New York Medical Record*, differs in many essential points in his views concerning the pathology of diphtheria recently advanced by some of the more prominent writers upon the subject. He does not regard croup and diphtheria as independent diseases. Only such differences exist as prevail generally between the sporadic and epidemic forms of the same disease. The membrane is regarded as essentially an epithelial product, and the peculiar granular amorphous material, which according to Oertel and others represents the essential element in the disease, and consists of bacteria, is believed by Jacobi to consist of detritus and fat-molecules, which are the products of degeneration of the epithelial cells. The author descants with disfavour upon the enthusiasm with which the bacteria doctrine in diphtheria has been generally adopted. He says, speaking of the anatomical relations of the tissues affected in diphtheria, that diphtheria of the mucous membrane preserves, generally speaking, certain distinct characteristics in different locations. Trendelenburg found by an experiment upon a rabbit that diphtheritic matter, when transplanted from the tonsil, where it was firmly and deeply embedded in the tissue, caused by the trachea deposits which were loosely attached to the mucous membrane. Where elastic tissue abounds, as in the trachea, it is to be supposed that the resistance to a deep penetrating of the diphtheritic process will be great; in case the elastic tissue becomes involved, recovery will become difficult. The kind of epithelium which is most readily affected by the diphtheritic process is the pavement. Hence, beside the prominent situation of the tonsils, the presence of this epithelium predisposes them to diphtheria. Ciliated epithelium belongs to a higher grade of organic deveopment, and hence is less liable to be destroyed. Moreover, the muciparous follicles affect the course of the pseudo-membranes in that their secretion tends to loosen the deposit and detach it. This effect is particularly seen in the trachea and in the respiratory part of the Schneiderian membrane. The vocal cords readily afford lodgment to foreign substances, since they form the narrowest opening in the passage to the lungs. They are covered with pavement-epithelium, which is the most liable to be attacked by the diphtheritic degeneration, and they have no muciparous glands. Thus, if there be any organ predestined for diphtheria, it is the vocal cords. Where there is not poison enough for a thorough infection, there is still enough for a local deposit limited to these structures. Where diphtheria has died out as an epidemic, the stray cases with limited infecting power will be known for years or decennia as so-called sporadic membranous croup, as we would speak for a generatio of an occasional case of sporadic cholera, or a stray case of variola.

DIPHTHERIA IN ANIMALS.

Mr. George Fleming, the eminent veterinary surgeon of the Royal Engineers, in a letter to the *Lancet*, says: "Of the existence of croup and diphtheria in animals there can be no doubt whatever. Simple membranous croup is not at all infrequent; young creatures are more disposed to be attacked by it than those which are old, and it affects all the domesticated animals, though the dog is more exempt than cattle or pigs; highly bred animals of the latter species are very liable, and in them the disease most closely resembles the human *angine couenneuse*, or *pseudo-membraneuse* of the French medical authorities. It has been witnessed in an epizoötic form in cats, and it frequently prevails as an enzoöty among poultry. The false membranes may be limited to the larynx, or they may extend to the pharynx, mouth, and nasal fossæ in one direction, and the trachea and bronchi in the other.

Diphtheria is certainly rare in animals, and has not yet been alluded to by veterinary writers in this country, I think. It nevertheless exists, and sometimes in a very marked form, differing from croupal angina by the great prostration which accompanies the formation of the diphtheritic exudations, and the tendency to a fatal termination. In addition, we observe a tendency to the production of plastic deposits wherever an artificial inflammation has been attempted to be set up. Blisters, for instance, instead of being followed by vesication or suppuration, are frequently succeeded by a more or less thick layer of fibro-albuminous matter. Setons are also often sheathed in a pseudo-membranous cylinder; the blood is very plastic at the commencement of the disease, and its clot is thick and very firm.

Diphtheritic exudations in the larynx and bronchi are somewhat common in cattle-plague, contagious pleuro-pneumonia, and some other bovine maladies.

We have no strong proof that croup or diphtheria is contagious in animals, except the former in fowls.

Two years ago I had a most interesting case of spasmodic croup in a troop mare, in which tracheotomy had to be resorted to.

HYPODERMIC INJECTIONS—THEIR USES AND THEIR DANGERS.

At the Société de Médecine de Paris a discussion upon the action of hydrochlorate of morphia injected subcutaneously followed a communication on the subject by M. A. Martin, who stated that even in small doses an enormous diminution in the force of the pulse and in the arterial tension rapidly took place. The maximum effect was about half an hour after the injection, and the pulse resumed its normal character an hour and a half after. Slight lowering of temperature occurred. M. Martin prefers full doses, particularly in nervous affections, and he does not consider it necessary to inject at the painful spot. If the needle is sharp the pricks are less painful. The first operations often cause indigestion. This is to be prevented by absolute repose. M. Martin believes the injections to be infallible in all neuralgias and efficacious against oppressions of all kinds, even those arising from cardiac disease or the access of asthma. He adds that they calm delirium tremens, and arrest obstinate vomiting even in cases of cancer. At the close of the treatment the doses should be diminished.

M. de Beauvois said that the injections ought never to be administered immediately after a meal. He had seen severe precordial anxiety, signs of approaching asphyxia, vomiting, &c., produced by neglect of this precaution. The vomiting relieved the patient from the other alarming symptoms.

M. Duroziez cited the case of a man, eighty-four years of age, suffering from strangulated hernia and incessant vomiting, in whom 3 centigrammes of morphia (nearly half a grain) injected twice caused death. This is a most important fact.

M. Polaillon believes that the hypodermic injection of distilled water by itself will relieve neuralgia and muscular spasms. In such a case we should think the imagination of the patient may have something to do with the cure. This suspicion is strengthend by an observation of M. Peter who, in a case of heart disease with intercostal neuralgia, injected 0·002 milligrammes of atropine. Immediately the patient fell down, pulseless and looking as if dead. Happily, he shortly recovered and as no symptoms of belladonna poisoning appeared, the cause of the syncope was probably due to the mental impression on the patient. A similar circumstance occurred to M. Krishaber on injecting a young woman affected with laryngeal phthisis with a small dose of morphia. Some days after he repeated the injection with distilled water only, and syncope again supervened.

In a patient affected with ataxia M. Peter injected, for the relief of visceral symptoms, doses of 0·15 to 0·20 cent. of morphia, giving at the same time 0·05 by the stomach. The patient concealed his doses when he was not suffering; one day he took a gramme of morphia by the stomach after 0.20 had been injected. No inconvenience followed this enormous dose. On the other hand may be mentioned a sad fact. A physician troubled with intercostal neuralgia employed injections of morphia in excess. One day a boil appeared at the site of injection, from this erysipelas started, and pleurisy ending in empyema supervened. The case terminated fatally.

Injections of morphia have arrested vomiting in cancer of the pylorus, enabling the patient to take milk and even soup. In paresis of the muscular coat of the intestine, in peritonitis, in tympanitis, M. Peter has succeeded with injections of morphia after strychnine had failed, and in his hands the same remedy has been of great value in the incessant cough with vomiting of consumptives and in palpitations.

Dr. Mattison (*New York Medical Record*, No. 231) mentions the case of a man who had used morphia hypodermically for nearly seven years, consuming daily some five grains in this way. The patient suffered terribly from tic douloureux, and his weekly consumption of morphia sometimes averaged one to two drachms. Dr. Mattison used heroic doses of the drug in this case, injecting as much as five grains at one sitting, with no apparent effect. He then injected chloroform deeply into the tissues, put the patient to bed, and gave him scruple doses of chloral every half-hour, until he went to sleep. Forty grains gave him a sleep of five hours' duration. When he awoke one forty-eighth of a grain of strychnine was hypodermically injected thrice daily, and at bed-time one-sixtieth of a grain of sulphate of atropia. He was then put on quinine and arsenic, with full nourishing diet. In four weeks the patient was cured. He increased in weight about five pounds a week.

A most decided obstacle to the withdrawal of the morphia was the fact that severe sciatica ensued soon after the relief of the tic douloureux. For the removal of this various remedies were tried in vain, until vesication along the course of the nerve involved was had recourse to. Fourteen blisters, about three-quarters of an inch square, were applied over the track of this nerve from the point at which it emerged until the popliteal space, according to the method used first by Cotugno.

Dr. Mattison holds that few cases of sciatica will hold out against hypodermic injection of strychnia conjoined with blisters. In this case the strychnia was continued for four weeks, during one week of which the dose thrice daily was equivalent to one-tenth of a grain, before symptoms of strychnia showed themselves, and then only to a limited extent.

Professor Nussbaum, of Munich, experimenting upon himself, on one occasion injected the solution of morphine into a vein, and he himself describes the effects in the following manner:—

"On one occasion, by injecting two grains of morphine dissolved in half a drachm of water, which I had made on myself repeatedly before without any evil consequences, I felt suddenly a most intolerable itching from head to foot; my face became purple; by-and-by I had ringing of the ears, sparkling and scintillations took the place of clear vision, and the most intense pain all along my scalp soon changed with the burning and itching. The most alarming symptom was the intensely accelerated action of my heart, the 150-170 beats of my pulse each minute were so strong, that I could see and feel every pulsation in the larger arteries of my body. These were stretched like metallic strings; the carotids lay like two iron rails on my neck. The pulsation of my heart was so strong, that I had the sensation as if my chest were pierced by an arrow, the drum of my ear were perforated at a single thrust, and as if my eyes had been torn out of their sockets. I opened one of my veins, having bled myself to about fifteen ounces. The beating and throbbing was somewhat lessened, the redness diminished, and I saw the peril disappear. I was perfectly conscious during all this time. I closed the wound I had made in my vein, I lay down on the sofa, and had ice constantly applied to my head with the greatest benefit. After the lapse of half-an-hour I was as well as ever."

CORYZA.

We are never wanting in cases of catarrh, although legions of certain cures have been published.

An interesting discussion on the subject took place at the Detroit Academy, apropos of an able paper read by Dr. Shurly, and published in the *Detroit Review* for March and April. In the acute stage he advocates abortive treatment by diaphoretics, and would thus, we suppose, delight the admirers alike of the Turkish bath, of the many hot possets and of warm beds, pediluvia, hot "nightcaps," &c., to say nothing of Dover's powders and James's powders.

For our part, we usually indulge in a full dose of morphine at bed-time, which, if the patient keep well covered, acts as a diaphoretic as well as a soporific, and arrests the cold at its first stage.

When called too late for this there is nothing for it but a resort to the well-known general and topical remedies, which are all described by Dr. Shurly. In chronic cases rhinoscopy comes in to determine the local treatment.

In the discussion, Dr. Carstens said the best abortive was quinine in scruple doses, and Dr. Conner thought it acted by dilating the capillaries throughout the body. If so, it would thus ally itself to diaphoretics. He also recommended solution of iodine in liquid carbolic acid as an inhalation, a few drops to be put on a tuft of cotton in a glass tube and inhaled three times a day.

Differences of opinion prevailed as to the use of douches; but inhalations and sprays were generally approved.

No one alluded to the "dry method," which seems never to have found many advocates, probably on account of the suffering caused by complete abstinence from fluids. To many the remedy is worse than the disease.

Various snuffs were mentioned, but they were evidently less popular than on the Continent.

A correspondent of the *Tribune Médicale* declares that he is always able to render an attack of coryza tolerable by the local use of tannin. For adults he employs the following kind of snuff:—

℞ Tannin, gr. ¾;
Pulviridis,
Pulv. althææ, aa gr. xv.;
Tinct. vanillæ, gtt. iv. M.

This is to be taken in small pinches three or four times a day, or oftener if necessary.

In the case of infants, in which coryza is more dangerous than in adults, since occlusion of the nasal fossæ may occur, and all efforts at suction of the breast be thus rendered impossible, the following ointment is made use of:—

℞ Tannin, gr. ¾;
Axungiæ, ʒi. ℈i.;
Tinct. vanillæ, gtt. v. M.

After having prepared this ointment, it is applied by rolling between the thumb and index-finger a very small square of paper, so as to form a not very rigid cylinder, which will yield easily to any lateral movement which may be made by the infant while it is being introduced into the nostrils. Then, after having smeared the exterior with the ointment, it is introduced deeply into each nasal fossa. In this manner we often bring about one or two very salutary attacks of sneezing, and always, as in the adult, free circulation of air in the nasal fossæ following the subsidence of swelling in the mucous membrane.

Cotton-Wool in the Ears as a Prophylactic and Curative Application in Coryza and Sore-Throat.—A correspondent of the *Practitioner* stated lately that colds or sore-throat may frequently be prevented by placing cotton-wool in the ears when an attack is feared, and that even when the attack has commenced it may be cut short by the same simple application. If one side of the nose or throat only is affected, it is sufficient to place cotton-wool in the corresponding ear. In some cases it is unnecessary to do more than plug the orifice of the auditory meatus, but in others having delicate ears it is advisable to cover part of the concha as well. The beneficial effects of the application are acknowledged to vary much in different persons, being most marked in those who have a large meatus or a thin and delicate ear, and are less distinct when the meatus is small or the ear large and thick.

The editor of the *Practitioner* says that at "first sight this proposal seems to be at least doubtful, if not absurd; but a little consideration will show that it is by no means unlikely to be of considerable practical use, and at the same time to throw some light on the causation of internal inflammations." Our *confrère* then goes on to say:—

"Inflammation of any part of the body generally follows the application of an irritant to that part, but sometimes it is produced by irritation in another part closely connected with the first by means of the nervous system. Thus, inflammation of a bruised finger occurs at the site of injury, but inflammation in one eye may follow disease of the other without the direct application of any irritant to it. The effect of an irritation seems to differ with the nature of the irritant applied, for the chafing of a saddle will produce inflammation and ulceration of the skin, while a shower of cold rain on the loins of a horse will have little effect on the skin, but will produce inflammation of the kidneys. Here the cold, acting on the nerves distributed in the skin of the lumbar region, causes inflammation of deeply-seated internal organs, but through what nervous channels it does so we do not at present exactly know.

"In the case of the ear, however, it is easy to see how an irritant applied to it may lead to sore-throat. Brücke mentions in his 'Physiologie,' and anyone can readily verify his statement, that if a paper spill be pushed well into the auditory meatus, and moved about, a feeling of tickling will be felt in the throat, and if the irritation is continued coughing will ensue. The reason of this is, that the vagus nerve gives off one branch (the ramus auricularis) to the ear, and another branch (the superior laryngeal) to the larynx, as well as branches to the pharynx. When the ramus auricularis is irritated by the paper spill, the irritation is not rightly localised by the nerve-centres, but is felt as if it had been applied to the laryngeal and pharyngeal branches of the same nerve. And if irritation of the auricular nerve by a paper spill thus causes a sensation exactly resembling the effect of irritation applied to the part supplied by the laryngeal and pharyngeal nerves, it seems by no means improbable that a continuous irritation applied to it by a draught of cold air may actually cause inflammation in the pharynx, while its protection by cotton-wool in the meatus may prevent any such consequences, in somewhat the same way as a covering over a horse's loins greatly lessens the risk of nephritis. The renewed application of the same irritant which has produced the inflammation may, and probably does, tend to keep it up. The cotton-wool, by preventing this renewal, may actually exert a curative as well as a prophylactic action. The effects of cotton-wool on cold in the head are more marked than upon sore-throat, but it is not quite so easy to show the nervous communication between the ear and the nose as between the ear and the pharynx.

"It is not unfrequently observed that cold is more readily caught from a draught playing on the side or back of the head than from one meeting us fairly in the face and blowing directly down our throat; and these observations on the nervous connections between the ear and the throat may help us to understand the cause of this, and suggest to us the propriety of delicate persons carefully protecting the sides of the head as well as of wearing a comforter.

"It must be borne in mind that strumous children, who are liable to colds, often suffer from discharges from the ear, and care must be taken that cotton-wool is not recommended indiscriminately and applied carelessly, as it might lead to the discharges accumulating in the meatus and doing mischief."

JOTTINGS FROM JOURNALS.

Uterine Polypus.—In a case of polypus, rising from the fundus of the uterus and filling the vagina, in a woman of 32, admitted into the Hospital Lariboisière, M. Tillaux, strong extraction and a sweep with the bistoury being premised, removed the tumour by means of the écraseur. A portion of the uterus, however, came away with the tumour, and the poor sufferer died eight hours after the operation. M. Tillaux regretted much that he had not confined himself to the bistoury throughout. He acted, however, as he believed, for the best, and had the bistoury alone been resorted to, the issue might not perhaps have proved more favourable.—*Le Mouvement Médical.*

Honey Ant.—As honey is one of the constituents of the Pharmacopœia, and as the matter is of interest otherwise, it is worthy of note that the Spanish journal *El Pabellon Médico* records the discovery in Mexico of a honey-gathering ant. The circumstance is abundantly curious; but no circumstantial description of this honey-storing ant, *hormiga que elabora miel*, is given.

Hernia Cerebri.—Professor Potradrazki, in Vienna, records a case in which there was a penetrating wound of the skull, at first followed by hernia cerebri. The ball traversing the glabella on the left side, formed a capsule for itself on the inner surface of the bone, while the opening in the bone itself became closed by a firm cicatrix (*narbe*). The professor winds up his instance by mentioning two cases—one that of a soldier who presented himself one day, under Boyer, in La Charité, with a swelling in his tongue which affected the utterance. It was found that a ball had lodged for four years in the part, but without the soldier's knowledge. The other case was one recorded by Percy, in which a ball had seated itself for six whole years in the same organ.—*Wien. Medizinische Zeitung.*

Internal Hæmorrhoids.—Dr. John Brinton passes some valuable remarks on the treatment as shown in an actual case in which the patient had suffered from profusely bleeding piles for ten years. He did not resort to excision, galvano-cautery, or the heated platinum wire, but to strong double ligatures introduced by a stout curved needle, traversing the base of the tumour, so as to strangulate the mass in segments. The patient was placed preliminarily under the influence of ether, and a one-grain opium pill was given and repeated in four hours, as well as occasionally afterwards, so as to enforce constipation for seven or eight days. The bowels had been preliminarily cleared out with castor-oil. Mild farinaceæ constituted the food. After the eight days more solid nutriment should be resorted to, which it was expected would be followed by a motion and the fall of the ligatures.—*Philadelphia Medical and Surgical Reporter.*

Herpes Zona.—A very singular case is related of the immediate relief and removal of a severe attack of this form of herpes implicating principally the left shoulder. Dr. Giné threw in a subcutaneous injection composed of two centigrammes of morphia in one gramme of distilled water. This was followed by the most prompt relief and a rapid recovery.—*La France Médicale.*

Urethral Reflex Irritation.—An important paper by Dr. Tessenden Otis on this subject has been delivered before the New York Academy of Medicine. The general and local disturbance, scalding on passing water, and local irritation were very considerable. This local and general reflex irritation, as connected with the genito-urinary apparatus, was ascribed to stricture of the meatus. The patients, some of them medical men, had been variously treated before they were dealt with by Dr. Otis. The results were very unsatisfactory. One and all, however, they experienced more or less permanent relief by the division of the stricture followed by adequate catheterisation. The paper has been published in a separate form by MacDivitt and Campbell, of Nassau Street, New York, and is well deserving the attentive perusal of operative surgeons.

Compression in the Treatment of Painful Affections of the Mamma.—M. Broca has found compression eminently serviceable in repeated instances, in otherwise obstinate neuralgia coupled or not with mammary adenoma, the tumour perhaps disappearing utterly. He applies first, locally, a layer of agaric (*amadou*) secured by bandages passing upon and beneath the shoulders, with a rolled bandage over all, only moderately tight, so as not to impede respiration.—*Revue de Thérapeutique Méd. Chir.*

Hypodermic Purgatives.—M. Luton, having dissolved 10 centigrammes of magnesic sulphate in one gramme of distilled water, injected it subcutaneously, and thus obtained, at pleasure, a gentle aperient effect or smart purgation. The results are recorded in the *Bulletin de la Société Médicale de Rheims.* M. Luton finds that these injections actually suspend or remove sympathetic vomiting, and thinks that they might even prove useful in sea sickness and in pregnancy.—*Mouvement Médical.*

Complete Lateral Luxation of the Ulna from Within to Without.—This form of luxation is rare, and hardly ever noticed, two cases, one by Nélaton and one by Dénucé, excepted. It is impossible here to enter into the details. We may state, however, that the arm hung perfectly loose and motionless by the side, there was considerable effusion of blood, and all the articular ligaments were lacerated. No inflammation, however, took place, the reduction was readily effected, and, moderate articular movements being followed up after the fifth day, the patient made an excellent recovery, and was discharged after a month's treatment.

Imperforate Hymen.—Rare as is this occurrence, Dr. A. Bertheraud has had occasion to treat three cases. The last was that of a young girl, aged 14. The local tumefaction and tension were so considerable that Dr. Bertheraud found the diagnosis, at least in the first instance, sufficiently difficult; with leeches and rest, however, coupled with catheterism of the bladder, so as to draw off the accumulated fluid, a resistent fluctuating tumour, occupying the vagina, became discernible. The young patient suffered excessively. The case was now clear, and after a hip-bath of an hour's duration, the bistoury yielded issue to a copious discharge of a thick, dark-coloured fluid. There ensued immediate relief, and dilatable canulas (*meches dilatatrices*) were introduced with the view of maintaining an outlet. The opening closed, however, so that a second recourse to the bistoury, followed by the introduction of a cone of sponge, proved requisite. The young person thus operated upon regained her health perfectly.—*Gazette Médicale d'Algerie.*

Notes on Chloral Hydrate.—M. Oré states (*Journ. de Pharm.*, May, p. 426) that a very small quantity of carbonate of soda is sufficient to remove the acidity of chloral hydrate in solution and to render it alkaline. There is a slight disengagement of carbonic acid and some chloride of sodium is formed. Comparative experiments have shown that whilst chloral hydrate retards the coagulation of blood, chloral hydrate thus rendered alkaline by carbonate of soda entirely prevents it. The addition of the soda does not at all interfere with the anæsthetic properties of the chloral.—*Ph. Journ.*

Plugging the Nasal Fossa.—When one has not a sound at hand, that of Belloc or some other, one may try a common stout thread, grease it well, then, having rolled one end into a ball the size of a pea, place it in the implicated nostril and direct the patient to sniff it up. If all go well, the ball, or what remains of it, is seen hanging beside the uvula, and all we have to do is to lay hold of it and plug forthwith.—*L'Independente.*

ABOUT BOOKS.

A Manual of Diet in Health and Disease. By Thomas King Chambers, M.D., F.R.C.P. London: Smith, Elder, and Co. 1875.

It is always a pleasure to take up a work written by Dr. Chambers. He is gifted with an elegant and clear style, which contrasts remarkably with a great deal of our medical literature. It is unfortunate for medicine that some of our journals have discouraged literary excellence, not only by giving currency to the productions of slovenly and inaccurate writers, but by sneering at some of our few well-written works as full of "fine writing," and extolling text-books remarkable for their heaviness. It is probable that could Sir Thos. Watson's lectures have appeared within the last few years, and without the prestige of his name, the dull critics of several of our contemporaries would have endeavoured to ridicule them as specimens of the "fine writing" they are incapable of themselves perpetrating. Nevertheless, those lectures have delighted as well as instructed successive ranks of students and practitioners. The same may be said of the former writings of Dr. Chambers, and this new work is worthy of its author.

It professes to be purely practical, and is divided into three parts—1. General Dietetics; 2. Special Dietetics of Health; 3. Dietetics in Sickness.

In the first part we find chapters on theories of dietetics, the choice and preparation of food, digestion and nutrition. These are fairly complete, and the information contained in them is brought down to date. The section on alcoholic drinks, as well as a separate chapter on alcohol, and a number of remarks scattered through the volume, show that the author is fully alive to the evils of the abuse, though by no means disposed to give up the use of this important agent.

The second part of the work contains most interesting information, and we would draw especial attention to the chapters on the diet and regimen of infancy, motherhood, childhood, and youth, as full of sound advice. The diet of commercial life and of literary and professional life is discussed in two chapters, which we commend to the attention of readers of these classes as the sage counsels of an accomplished and experienced physician.

Some of our readers may take most interest in the subject of diet in disease. On this they will find full information in the nine chapters which compose the third part of the work before us. Some will naturally turn to that on gout and rheumatism. It is an excellent chapter, but it contains one statement on which we should be thankful for further information. It is this:—

> "*Chronic rheumatism*, or the *rheumatics*, seldom need lay a patient up, if he will adopt the simple dietetic expedient of eating a certain quantity of fresh mustard with every meal—much if he is worse than usual, a little if he is pretty comfortable."

If Dr. Chambers can declare from his clinical experience that this is a fact, thousands of rheumatic men and women will be ready to bless him for the discovery, and we should not be disposed to demand an elaborate theory to account for so simple a method of cure. Empiricism has furnished us with remedies the action of which we cannot explain; but a statement like this requires confirmation, and we should be very glad to learn a little more of our author's experience in this matter. On another page he recommends cayenne pepper to gouty patients. This also will be new to many, and as Dr. Chambers's book is sure to find numerous readers, medical men may expect to be asked whether these condiments are really so effective. We should be pleased if Dr. Chambers would give them further information through our pages.

The remaining chapters treat of diet in fevers, inflammations, stone, albuminuria, diabetes, scrofula, rickets, consumption, nerve disorders, deficient evacuation, and disease of the heart and arteries. On all these Dr. Chambers writes with the authority of a sound clinical teacher. Like the whole of the book, these chapters are most readable. In fact, we may say that the special distinction of the work before us is that it offers in a moderate compass a readable account of all that it is necessary to say in a practical manual on diet.

Heredity: a Psychological Study of its Phenomena, &c. By T. Ribot. London: Henry S. King and Co. 1875.

No one could have been better fitted for undertaking the writing of the volume before us than its talented author, Professor Ribot, who has entered most fully into the important subject treated of in a clear, concise, and masterly manner. He defines *heredity* as "that biological law by which all beings endowed with life tend to repeat themselves in their descendants; it is for the species what personal identity is for the individual."

Heredity may also be traced in all that concerns the complexion of the skin, and the shape and size of the body: thus, for example, obesity is often the result of an organic predisposition, and occasionally makes its appearance amid privations and under all the disadvantages of hard labour and poverty. We fully agree with our author in the following paragraph:—

> "Heredity influences the internal conformation no less than the external structure. Nothing is more undisputed than the heredity of form, size, and anomalies of the osseous system, and every day experience proves the heredity of all the proportions of the cranium, thorax, pelvis, vertebral column, and the smallest bones of the skeleton. Even the heredity of excess or defect in the number of the vertebræ and the teeth has been ascertained. The circulatory, digestive, and muscular systems obey the same laws which

govern the transmission of the other internal systems of the organism. There are some families in which the heart and size of the principal blood-vessels are naturally very large, others in which they are comparatively small, and others again which present identical faults of conformation. Lastly, heredity regulates the proportions of the nervous system. It is evident in the general dimensions of the brain, the principal organ of that system; it is often apparent in the size, and even in the form of the cerebral convolutions. This fact was observed by Gall, who thereby accounted for the transmission of mental faculties. . . . The blood is more abundant in some families than in others, and this superabundance transmits, or may transmit, to the members of such families, a predisposition to apoplexy, hæmorrhage, and inflammation. Thus there exists in some families such a liability to hæmorrhage that even the prick of a pin may cause in them a flow of blood that cannot be checked. . . . Heredity governs the subordinate no less than the dominant characteristics: thus, fecundity, length of life, and those purely personal characteristics which physicians call idiosyncrasies, are hereditarily transmitted. . . . There are also, on the other hand, many families in which the hair turns grey in early youth, and in which the vigour of the physical and intellectual faculties fails prematurely; in others, early death is of such a common occurrence that only a few individuals can escape it by great precaution."

The above observations are becoming more fully recognised and acted upon, especially by insurance companies. As a commentary, then, on the author's remarks, we may remark that not only are normal peculiarities transmitted from father to son, but also disease runs in families, or at least tendency to them—for instance, phthisis. Moreover, an external likeness, make of body, even walk, manner of speech, &c., may be well supposed to be associated with an equal similarity of constitution. The conformation of body is dependent partly on inheritance, but is, however, largely affected by external conditions. As a rule, all men might be divided into *two* classes, classified according to their family history—viz. (1) short-lived robustness, and (2) comparatively frail longevity. Inherited disease usually appears at about the same age in the inheritor as it did in the person from whom it was inherited; but the general rule is that inherited fatal diseases have their issue at about the same age in a subject as that at which a near ancestor died.

M. Ribot has divided his work into sections, four in number, as (1) *The Tracts;* (2) *The Laws;* (3) *The Causes;* (4) *The Consequences.* Thus, for example, in Part 2 we have treated in different chapters the subjects of influence of parents, atavism, collateral heredity, statistics, &c.

In conclusion, we believe that M. Ribot's work is a most complete treatise on heredity, and should be read by every physician.

Ziemssen's Cyclopædia of Practical Medicine. (International Translation.) London: Sampson Low and Co.

AMONG the literary works of the time we have to announce as publishing, by special arrangement with the German publisher and editor, a copyrighted translation of Ziemssen's "Cyclopædia of the Practice of Medicine." Three volumes are ready, and contain the following important articles:—Vol. I. Acute Infectious Diseases.—Part I.: Abdominal Typhus, by Professor Liebermeister. Exanthematous and Recurrent Typhus, Cholera, by Professor Lebert. The Plague, by Professor Liebermeister. Yellow Fever, by Dr. Haenisch. Dysentery, by Professor Heubner. Diphtheria, by Dr. Oertel.—Vol. II. Acute Infectious Diseases.—Part II.: Varicella, Measles, and Scarlatina, by Dr. Thomas. Variola and Varioloid, by Dr. Curschmann. Erysipelas, Miliary Fever, by Dr. Zuelzer. Malarial Infection, by Professor Hertz. Epidemic Cerebro-Spinal Meningitis, by Professor von Ziemssen.—Vol. III. Chronic Infectious Diseases: Syphilis, by Professor Baeumler. Trichinosis, Echinococcus, and Cysticercus Diseases, by Professor Heller. Infection by Animal Poisons—Rabies, Glanders, Worms, Malignant Pustule, Snake-bite, Flap, Foot-rot, &c., by Professor Bollinger.

The work is issued by subscription. Intending subscribers may obtain further particulars, with prospectuses, from Dr. Palmer, 23 Dorset Street, Portman Square, who will also be happy to show specimen volumes.

AT THE SOCIETIES.

AT THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, APRIL 27TH.

SIR JAMES PAGET in the Chair.

PRACTICAL OBSERVATIONS ON THE PULMONARY AND CARDIAC COMPLICATIONS OF ABDOMINAL TUMOURS: WITH REMARKS ON BLOOD-LETTING AFTER SURGICAL OPERATIONS.

By WILLIAM HENRY DAY, M.D., M.R.C.P.

The author first described some of the effects of solid or cystic abdominal tumours, and of large collections of fluid in the peritoneal cavity, in displacing the thoracic organs, and inducing a long series of constitutional and local symptoms. the showed the importance of ascertaining the condition of He lungs and heart before deciding upon the removal of fluid or of tumours from the abdominal cavity. He examined the effects of rapid and of gradually increasing pressure upon the thorax, and also the results of the rapid removal of pressure by tapping or by the removal of a tumour, advocating the gradual removal of pressure whenever practicable, and giving several instances to prove the utility of venesection in cases where portions of lung which had been compressed have rapidly expanded, and congestions or hepatisation have followed. He also gave instances in which organic diseases of the lung have been relieved after the pressure which aggravated the symptoms had been removed. He compared the pulmonary symptoms which often follow operation on the abdomen with the more ordinary forms of bronchitis or pneumonia, and gave practical details of treatment in different classes of cases. The author ended his paper by endeavouring to enforce the two following conclusions: 1. The surgeon who treats cases of abdominal distension must not overlook the pulmonary and cardiac complications which are due to compression or displacement. 2. The success of operations for the removal of abdominal tumours may be increased or diminished by careful examination of the state of the chest before operation, and by equally careful attention after the operation, not only to the parts involved in the surgical proceedings, but also to those changes in the blood and in its circulation through the heart and lungs, and to the effects on these organs, which are due to sudden removal of pressure alone, or to other causes of considerable elevation in the temperature of the blood.

Mr. KNOWSLEY THORNTON, who had seen the cases referred to, thought they seemed to bear out the author's remarks on blood-letting. As to the two important questions—when should blood-letting be performed? and in what class of cases? he thought that it should be done promptly, when the first symptoms appeared—flushing of the face, with rapid pulse and hot dry skin—even though there was no rise of temperature. If this period were allowed to pass, blood-letting did not seem to act so readily. The application of cold to the head was very useful in many cases, in which there appeared to be a condition of brain which led to a rise of temperature and rapid pulse. For this purpose he recommended the cap (or a modification of it) used by Mr. Lister, by which a constant stream of water was constantly poured over the head. Under the application of cold to the head, symptoms of acute bronchitis sometimes rapidly ceased. The action was too rapid to be accounted for by cooling of the blood; it seemed as if some influence were exerted directly on the brain. This method was preferable to the cold pack in hyperpyrexia, while in septicæmia the latter was especially indicated.

Dr. Prothero Smith had for many years practised venesection in preparing patients for ovariotomy.

Mr. Spencer Wells doubted whether small bleedings before the operation would have much influence on the result. He rather agreed with Mr. Thornton that when it was necessary to bleed after ovariotomy the bleeding should be early and free. Since Dr. Day's paper was written he had had four or five cases in which bleeding was followed by remarkable relief. He could also bear testimony to the usefulness of the ice-cap, which had the advantage over the cold pack that the patient was not disturbed. He had lately given small and repeated doses of aconite—half a drop of the pharmacopœial tincture every half-hour—with the effect of quickly rendering the pulse slower. The effect on temperature was less marked.

A CASE OF LEFT SUBCLAVIAN ANEURISM TREATED BY TEMPORARY COMPRESSION APPLIED DIRECTLY TO THE ARTERY IN THE FIRST PART OF ITS COURSE.

By Arthur Fergusson McGill, F.R.C.S., Leeds.

(Communicated by John Wood, F.R.S)

The patient, a laundress, aged 35, had been suffering from an aneurism of the third part of the left subclavian artery for three years. She had been treated by digital compression, by manipulation, and by repeated galvano-puncture. The first two methods were adopted without result; the last with great, though temporary improvement. In December, 1874, it was found on examination that the pulsation extended upwards from the centre of the clavicle for 1¼ inches and downwards and outwards from the same spot for 2½ inches. The patient was suffering much from pain; her rest was impaired, and she was rapidly becoming worse. Under these circumstances it was determined to try the effect of temporary compression applied directly to the artery at the first part of its course. On January 2nd, 1875, the operation was performed. An incision was made from the centre of the sternum upwards along the anterior border of the sterno-mastoid for two inches, and another of the same length along the clavicle; the sternal and part of the clavicular origin of the sterno-mastoid muscle was then divided, and the anterior scalenus and first rib were reached. After searching with the finger, the artery was found displaced backwards, and an aneurism-needle was passed round it. In passing the needle a small opening was made in the pleura. The artery being isolated from the surrounding structures, a pair of torsion-forceps were applied, and left on for ten hours and a half. The next day there was a return of pulsation in the sac; but this disappeared in twelve hours. She was apparently doing well, when symptoms of pleurisy and bronchitis supervened, and she died at the end of five and a half days. Leave could not be obtained to make a complete *post-mortem* examination, but a partial examination at the seat of the operation was allowed. The forceps had been applied at the point where the vertebral was given off, and at that position the artery was patent and healthy. The aneurism, which commenced a quarter of an inch from the thyroid axis, and extended outwards for 3¼ inches, was filled with a hard clot, and was in fact cured. The operation was only performed after grave consideration. It was thought (1) that no other method of treatment could be adopted with advantage; (2) that the proposed operation was practicable; and (3) that there was a reasonable prospect of success. The second of these opinions was arrived at after making many dissections on the dead body, and after learning that Dr. Rodgers, of New York, had applied a ligature to the subclavian artery in this position. It was thought that the application of a ligature in the ordinary manner was unjustifiable, as experience showed that patients on whom this operation was performed almost invariably died of secondary hæmorrhage. It was hoped that, by applying temporary compression, this accident would be avoided; while the experience of the rapid-pressure treatment of aneurism, introduced by Dr. W. Murray, showed that a cure by this procedure was not improbable. When this method of treatment was adopted, the cure was not effected by the gradual deposition of layers of fibrine, but by the sudden coagulation of the contents of the sac. This would account for the return of the pulsation on the second day after the operation. Though in this case the treatment had not been successful, it seemed probable that it might hereafter prove so in similar cases.

Mr. John Wood said that the application of direct pressure to an artery was different from pressure from without; it was difficult to regulate the force applied so as to avoid sloughing of the vessel.

Mr. Henry Lee said that the filling of an aneurismal sac with clot was not the same thing as curing the aneurism. He had had a case of inguinal aneurism which he treated by flexion. A clot formed; but the patient would not keep his limb bent, and the clot disappeared in two or three days. This was followed by intense and long continued pain in the course of the femoral artery, as if portions of the clot had been washed down the vessel.

Mr. Hulke said that Scarpa used a broad ligature for the purpose of occluding arteries without dividing the middle and internal coats.

Sir James Paget called attention to the method recommended by Mr. John Dix of Hull, of using wire, bringing out the ends through the skin apart from the wound, and twisting them over cork, so that the ligature could be tightened or loosened at pleasure.

Mr. McGill replied that the pressure was to be applied as lightly as possible, in order to avoid division of the inner and middle coats of the vessel.

Tuesday, May 11th.

ON THE HISTOLOGY OF THE SO-CALLED NUTMEG LIVER.

By J. Wickham Legg, M.D.

The author, after reviewing the opinions which have been held concerning the anatomy of nutmeg liver, gave the result of his examination of twenty such livers. He found the vessels in the centre of the lobules dilated, with a corresponding atrophy of the liver-cells around them, but with no new growth of connective tissue in the centre of the lobules, as Rokitansky, Frerichs, and Virchow have held. He found, on the contrary, that the growth of the connective tissue is well marked in the capsule of Glisson, and between the lobules, just as in the early stage of primary cirrhosis, and he looks upon this overgrowth as the cause of the shrinking and hardening of the liver in advanced stages of nutmeg liver. Other cases of the overgrowth of the connective tissue in organs subject to persistent hyperæmia were brought forward; and the paper ended with a protest against the name of red atrophy given to the atrophous nutmeg liver by Rindfleisch.

Dr. Thin inquired whether Dr. Legg thought that connective tissue passed between the rows of liver-cells in a lobule; he had only referred to blood-vessels, and had made no mention of connective tissue which the mode of preparation employed might have altered.

Dr. Green said that the author had shown there were two distinct kinds of change in a nutmeg liver—namely, first, atrophy and pigmentation of liver-cells in the centre of each acinus; and secondly, an increase of connective tissue at the margins. The first is the most important part of the process, and he thought too much stress had been laid upon the second element. He had not seen such marked connective tissue overgrowth, especially nuclear, in the portal canals in these cases. The indurative changes set up in organs by chronic congestion were due to increase in connective tissue, often nucleated, and not to be distinguished from the appearances due to chronic inflammation. As a rule, it differs in being less nucleated, and it is certainly a question as to how much of the connective tissue in these cases is due to new growth, and how much to atrophy of vessels, &c. At any rate, it is certain that some amount of new growth results from chronic congestion.

Dr. Handfield Jones had examined the liver in all stages of cirrhosis, and had never fairly satisfied himself that the process was an inflammatory one. The growth of connective tissue was often ascribed to spirit-drinking, but this was insufficient, alcoholism more often producing fatty degeneration. He had thought rather this fibroid degeneration of organs was part of a general change occurring in different parts of the body at the same time; a change opposite to that met with in phthisis, where the new-formed tissue goes on to a cheesy condition. During life he had never been able to ascertain a previous stage of inflammation in cirrhosis of the liver.

Dr. Legg, in reply, said he was aware of the controversy as to the existence of sheaths of connective tissue around the columns of liver-cells, in a lobule, proceeding from the portal canals to the hepatic vein. He thought "chronic inflammation" an ill-defined term, and would be the last to attribute the changes he had described to any such cause.

SEQUEL TO A PAPER ON EXCISION OF THE ANKLE-JOINT.

By Mr. Henry Lee.

In a former communication on Resection of the Ankle-joint the plan of dislocating the lower extremity of the tibia and the upper surface of the astragalus outwards was advocated by the author as the best mode of performing the operation, but it was demonstrated that before this could be done the internal malleolus must be removed. A division of the internal lateral ligament is not sufficient; the projection of the internal malleolus when present prevents the foot being turned sufficiently inward as long as the upper surface of the astragalus is held in apposition with the lower extremity of the tibia by the tendons which pass behind the ankle-joint. The difficulties of dislocating the bones in order to perform the operation satisfactorily were considered in all the plans which had previously been suggested. A case was given, which was believed to be the only one on record, where a complete primary resection of the ankle-joint was performed, and in which a most satisfactory result was obtained. In this case the bones had been dislocated outward, and the extremities of the tibia and fibula were removed without any attempt at reduction being made. On the 27th of January last another case fell under Mr. Lee's care, in which a similar compound dislocation of the ankle had occurred; but in this case the lower extremity of the tibia was dislocated inwards, and projected for two or three inches through the skin. The extremity of the internal malleolus had been detached, and remained connected with the internal lateral ligament. The fibula was broken about three inches from its termination. In this case the lower extremity of the tibia was sawn off, and the bone replaced in its normal position; an incision was then made over the external malleolus, and the periosteum separated from the bone as much as practicable. The external lateral ligaments were then divided, and the lower broken portion of the fibula removed. The limb was then again placed on its outer side, and the upper surface of the astragalus made to protrude as much as possible through the internal wound. A deep horizontal groove was made by means of a small saw below its upper articular surface. This surface was then removed completely by means of the cutting-pliers; the two smooth surfaces of bone were then placed in apposition, and carbolic dressings applied to the wound. A very severe attack of erysipelas occurred on the fourth day, which extended up the leg and thigh, the skin being of a very deep livid colour. It was feared that gangrene of the limb might take place, as had occurred in another patient who had the same symptoms, and who was admitted about the same time with a compound fracture of the leg. A deep incision was made on each side of the leg, from which there was soon a copious discharge of pus. The skin now assumed a bright red colour, and the erysipelas, having run its course, gradually subsided. The portion of the astragalus which had been removed had, and still has, attached to it a portion of the anterior tibial artery, which had been torn through at the time of the accident. The case previously recorded offers some interesting points of contrast with the present one. In the first the bones were dislocated outward, in the second inward. In the first the internal malleolus was not removed, although detached from the tibia, and the fibula in that case was not broken. The internal malleolus, which was allowed to remain, proved to be the cause of some subsequent irritation and suppuration, and the conclusion was arrived at that both malleoli ought in this operation to be removed, whether detached or not. The principal point, however, to which the author wished to direct attention, was the much greater facility which there is in removing the upper surface of the astragalus where that bone is dislocated outward, than when an attempt is made to displace it inward. This, in the author's opinion, makes a very great difference where a surgeon can choose which operation he will perform. Even after both malleoli are removed, the powerful tendons which run behind the joint on its inner side tend to prevent the astragalus from being inverted, and are of themselves sufficient to account for the difficulty that surgeons have experienced in attempting to turn the astragalus sufficiently inward to remove its upper articulating surface. This he did without diffiulty in the first case, by a clean section through the entire upper part of the bone, but he could not do so in the second without distressing the surrounding parts more than might be desirable. After the saw had been used to a certain extent, the upper surface of the astragalus had to be removed in three different portions by the cutting forceps.

ON THE CONSTRUCTION AND USE OF A NEW FORM OF CARDIOGRAPH.

By A. L. Galabin, M.D.

The author pointed out the liability to error which exists in Marey's cardiograph, and in the modification of it by Dr. Burdon-Sanderson, in consequence of the use of a flexible tube containing air to transmit the motion. Two effects may be produced in this way: first, the rounding off of any abrupt features in the curve; and secondly, the introduction of oscillations. It has been shown by Dr. Rutherford that, if even a slight impulse be communicated to the instrument by the finger oscillations do occur. The mode of verification adopted by Marey, in which a motion already known was communicated to the instrument by the rotation of the eccentric, proves only that such a curve as that described by his cardiograph can be transmitted a second time without further considerable change, and not that the original cardiac motion could be accurately depicted. The most perfect cardiograms hitherto obtained have been those procured by the application of the sphygmograph directly to the apex of the heart. The sphygmograph cannot, however, be generally used in this way in cases of heart disease, for two reasons:—In the first place, the extent of the cardiac motion varies very widely, and when the heart is hypertrophied it becomes far too great to be recorded; and in the second place, when the sphygmograph is applied to the chest, not only the spring-pad, but the framework is influenced by the cardiac impulse in cases in which the apex-beat is diffused, and in this way the curve described becomes modified. The cardiograph invented by the author is such a modification of Marey's sphygmograph that these two difficulties may be avoided, and tracings obtained in all cases direct from the apex of the heart. In order to attain this object, the knife-edge by which motion is communicated to the recording lever is not rigidly connected to the spring pad, but is attached by a sliding bar, which can be fixed in any position by a screw. In this way the amount of amplification given to the motion can be varied from about ten to a hundred times the original. The instrument is also attached to a movable frame in such a way that the wooden bars on which it rests can be separated to a width of five inches. And the brass-work can be raised or lowered at either end. It can thus be adapted to a chest of any size or shape. In tracings obtained by this cardiograph, the thrill which accompanies a murmur is often depicted as a vibratile line in the curve, and then the exact relation of the murmur to systole and diastole is permanently recorded. The shape of the systolic part of the curve indicates the proportion which hypertrophy bears to dilatation, while aortic regurgitation is shown by a rapid ascent during diastole. In many cases of mitral contraction an increase and prolongation of the auricular elevation is seen, while in some others, in which a direct mitral murmur appears to be due to the venous flow, the auricular systole is either not discernible or it appears in its usual position and not prolonged.

AT THE CLINICAL SOCIETY OF LONDON.

April 23rd, 1875.

SCALD OF THE GLOTTIS: WITH DEPOSIT OF DIPHTHERITIC MEMBRANE IN THE PHARYNX, LARYNX, AND BRONCHI.

Mr. R. W. Parker read the notes of this case. The patient was a little girl, aged 3, under the care of Mr. Thomas Smith, in the Hospital for Sick Children. She had put her mouth to the spout of a kettle, which was boiling on the hob, and from which steam was actually issuing at the time. She would not swallow anything that same evening; but there was no difficulty with her breathing. Indeed, the immediate effects of the accident seem to have been slight, as she was not seen by a medical man for thirty-six hours. It was not until three days afterwards that the breathing became really affected, and she had a "croupy" cough for the first time. During the next two days her breathing became more laboured and her voice weaker, and on the sixth day from the accident she was admitted into the hospital. She was now exceedingly low and depressed, breathing very rapidly, and with great difficulty, but she did not struggle for breath. Her voice was entirely suppressed. There was great contraction of the hypochondriac regions with each inspiration. The mouth was carefully examined, and the lips, tongue, palate, and tonsils were found free from any visible injury. On the posterior wall of the pharynx a small patch of membrane was seen. An ice-bag was applied to the neck, but at the end of two hours there was no amelioration, so tracheotomy was performed. Two long pieces of membrane were got up with the aid of a feather; one of them was tubular, and about the size of a crow-quill. The child was greatly relieved by the operation. The general condition, however, rapidly became worse; she ceased to take notice of anything or anybody, and died thirty-six hours later of blood-poisoning and exhaustion. The post-mortem examination showed the lips, tongue, and tonsils to be normal. Two small erosions existed on the hard palate at its junction with the soft. The anterior surface of the soft palate was normal; its posterior surface was rather swollen and mammilated in appearance, from swelling of the glands of its mucous membrane. There was a small patch of membrane on the base of the uvula, and another just above the left arch of the palate, another piece on the posterior surface of the posterior pillars of the fauces; these pieces were not perfectly separable from the mucous membrane. The epiglottis was covered with membrane, and was thickened and swollen, as were also the aryteno-epiglottic folds. The tracheal mucous membrane was intensely red and injected, and coarsely granular in appearance; this appearance extended as far as the tertiary bronchi. In some of the bronchi pieces of thin, reddish, well-formed membrane were found. In the lungs there were patches of slight superficial collapse; the margins and bases were slightly emphysematous. No pneumonia was present anywhere. No urine was observable during life, but a little found in the bladder after death contained albumen and hedgehog-crystals of urates. It was argued that the membrane was not directly due to the hot steam, therefore, that it was not a slough: 1. Because those parts with which the steam would first come into contact were not injured, while parts with which the steam could not come into contact were patched with membrane; and further, because membrane was found in the tertiary bronchi, where, even if the steam penetrated at all, it must have been so cooled by admixture with the contained air, and by contact with the bronchial secretion, that it could not then have caused the extensive mischief described. 2. Because the dyspnœa did not commence until three days after the accident, and only became urgent on the sixth day. The insidious onset of the more acute symptoms, on the contrary, suggested the diphtheritic nature of the complication, and the post-mortem evidence favoured this view. Mr. Parker maintained that the fact that false membranes had been found under a variety of circumstances, such as scalds of glottis, foreign bodies in the larynx, and in cut-throat cases, could scarcely be urged as an argument in favour of the non-specific nature of such exudations, any more than that the erysipelas which attacked a hospital patient after operation was non-specic,h because the patient, though in exactly the same surroundings, had resisted the contagious influence for five or six weeks previously to his operation. Finally, the identity of croup and diphtheria was inferred from the fact that the same contagion would produce the two diseases indifferently, and, in illustration, the following cases were read. A little girl was taken into the Children's Hospital with typhoid fever, and when she was in the fourth week of the disease she had laryngeal diphtheria, and had to be tracheotomised. The disease began with a loud croupy cough, and slight hoarseness, which lasted for several days, but there was no dyspnœa. There was no enlargement or tenderness of the submaxillary glands. There was no albumen in the urine; there was no dysphagia; no marked depression; and there was no membrane about the fauces. After an emetic on the fourth day of the disease she vomited freely, and, in the effort of vomiting, she brought up some tough white membrane; other pieces were brought up on the two following days. Being much worse, she was tracheotomised. On the ninth day after the operation the urine became albuminous, and continued so for eight or ten days. She recovered. A few days later another child in this same ward, who was under Mr. Smith for scrofulous disease of the knee-joints, began to be ill, with symptoms of languor and depression; then her temperature rose to 104·4 degs. Fahr., she was flushed, and felt sick, and could not swallow without discomfort. On closer examination it was found that there was swelling and tenderness of the glands below and behind the angles of the lower jaw. The uvula was of a deep red colour and swollen. Both tonsils were enlarged, and deep red in colour, and on the inner surface of each there was a patch of white membrane of the size of a fourpenny-piece. The voice was pharyngeal in quality, otherwise not altered. There was no dyspnœa; no albumen in the urine. In eight days from the commencement the membrane had entirely disappeared, the swelling of the throat was subsiding, and the child's general condition improving. She quite recovered. A fortnight later one of the nurses in the same ward had a sore throat. On examination, the fauces were found red and congested, the tonsils large, and the left one spotted with half-a-dozen small white dots. The submaxillary glands were not enlarged. Now, had the first case not been operated on, she would quickly have died, and the disease in her case would have been found localised in and confined to the larynx, and on post-mortem examination it would have been demonstrated as true croup; while, had the second child died, the case would just as certainly have been called one of diphtheria; and there would be no hesitation in speaking of the third case as follicular tonsillitis. No doubt these three diseases were due to one and the same cause, the difference in manifestation being the result of idiosyncrasies of the individual attacked or of the organ implicated.

Dr. Dickinson could not concur in Mr. Parker's conclusions. The child must have been peculiarly unfortunate to have suffered from the effects of scald one day and on the next to have been attacked with diphtheria. Irritants, as boiling water, acids, &c., were well known to produce membranous inflammation of the larynx. The assertion that croup and diphtheria were identical was one of the most startling manifestations of the present change in the current of thought in medicine. It might, indeed, be impossible to discriminate croup and diphtheria by the occurrence of membranous inflammation of the larynx alone; but how could a case of scarlet fever be distinguished after death from one of simple cynanche pharyngea? or how, as Dr. Moxon had pointed out, could Asiatic be distinguished from English cholera when the anatomical lesion was alone presented? or contagious erysipelas from the same affection following a gumboil or inflamed tooth? Clinically, however, typical cases of croup and diphtheria differed most widely. Croup began with nasal or bronchial catarrh, and the inflammation, spreading to the larynx, led to the formation of membrane. Diphtheria had no antecedent catarrh, but was ushered in by a general febrile condition resulting from a specific poison, and was accompanied by the formation of false membrane primarily on the pharynx, which might spread to the larynx. In the worst cases the exudation was limited to the pharynx, nasal passages, and mouth, and death occurred from asthenia. The laryngeal inflammation in croup had no tendency to spread. Glandular enlargements, the early appearance of albumen in the urine, and the frequent supervention of peculiar nervous sequelæ, characterised diphtheria. The etiology was different: croup was frequently traced to cold, diphtheria mostly to exposure to some definite poison—*e.g.*, sewer-gas. The outbreak of diphtheria in the Children's Hospital, quoted by Mr. Parker, was traced to defective drainage and escape of sewer-air into the ward.

Dr. Hilton Fagge agreed with Dr. Dickinson, and was partly influenced by the fact that membranes might be found in the larynx under very different circumstances, as in cut-throat. Every few weeks or so a child was brought to a London hospital suffering from croup. If it died, a membrane might or might not be found in the larynx, and it might reach the bronchi. In the pharynx there was usually more or less membrane. In old times the presence of membrane on the pharynx in croup was seldom recognised; but since the introduction from the French of the term "diphtheria," it had been taught that any membrane whatever seated above the aryteno-epiglottic folds was diphtheritic. Moreover, the older physicians, recognising croup from its clinical features, might readily have passed over small patches of exudation on the palate and fauces. Only a small proportion of cases met with in an epidemic of diphtheria presented a marked laryngeal character; and, according to his experience, it was the rarest thing to find diphtheria admitted into a hospital apart from an epidemic. It was, indeed, highly probable that so-called "laryngeal diphtheria" in children was merely croup. He believed that every true case of diphtheria was as contagious as the exanthemata. Croup and diphtheria could not be distinguished by their anatomical characters; but in London a case of membranous laryngitis would probably be croup. Much of the confusion between the two affections arose from the use of the word "diphtheria" by German writers; thus Virchow gave the term "diphtheritic" to that form of inflammation in which the deeper layers of the mucous membrane were infiltrated, the whole altered membrane sloughing off; and Niemeyer, adopting this view, applied it to epidemic diphtheria. This was clearly erroneous, and a more correct interpretation was given by Rindfleisch, who admitted the anatomical identity between laryngeal and pharyngeal croup (diphtheria). But it had led to the view being taken in England that the diphtheritic membranes should be inseparably adherent, and should invariably leave a raw surface when detached.

Dr. **Duckworth** concurred with Drs. Dickinson and Fagge. He urged that although the presence of membrane on the pharynx could not be held to be distinctive of diphtheria, there was invariably in this disease a peculiar turgidity and redness of the mucous membrane of the pharynx (even in purely laryngeal cases) which was never seen in croup.

Mr. T. **Smith** pointed out that Mr. Parker's case refuted the statement that the membrane resulting from local irritation was not the same as that resulting from diphtheria; for here it had no character of a slough, but was precisely the same as a diphtheritic exudation.

Dr. **Yeo** was more inclined than formerly to regard croup and diphtheria as identical, for he had seen cases presenting the symptoms of croup to which diphtheritic symptoms were added. One such, a child, died from blood-poisoning, although tracheotomy had been performed with great relief. The larynx and trachea were studded with circular patches of exudation. He thought Mr. Parker was quite justified in his opinion that the scalding water did not pass the glottis. One explanation of the escape of the buccal mucous membrane might be found in the fact that this was ordinarily exposed to rough substances without injury.

Mr. **Barwell** had seen several cases of scald of the throat produced by children sucking the spouts of tea-kettles. The child, being frightened, made a deep inspiration, and thus drew water into the back of the throat, so that it was quite conceivable that some might enter the larynx. In the only case he had seen after death the trachea was lined by false membrane, while the tongue was abraded from contact with the spout of the kettle. He agreed with Dr. Dickinson that it would be very remarkable had a child been attacked with diphtheria directly after it had scalded its throat.

Dr. **Cayley** pointed out that the theory of non-identity required that more than one cause could produce the same effect; in the opposite view, many effects had the same cause; one of the chief arguments against the identity of croup and diphtheria being that the identity of the membrane was no evidence of the identity of the disease. But it was notorious that the same poison or the same irritant produced very different effects in different individuals. He had had cases which, from their sudden onset and rapid course, would be called croup, proving fatal within forty-eight hours, whether tracheotomy were performed or not. In all false membrane had occurred in the fauces. Such cases were truly laryngeal diphtheria, so rapidly fatal as not to show any other of the symptoms of that disease. He recognised two distinct forms of diphtheria: one in which the general manifestations predominated, and the other in which the local symptoms were chiefly exhibited. Cases of the latter kind occurred even in epidemics; and he held the two diseases to be identical, and both due to the same poison.

Dr. **Greenhow** thought that Mr. Parker's case was one of diphtheria, in which the scald played the part of a determining cause; and he strongly upheld the view that croup and diphtheria were perfectly distinct affections. The marked depression characteristic of diphtheria was absent in croup. He had recently had under his care a case of croup, which was treated by leeching and depressing remedies, emetics, &c., with success; but such treatment could never be adopted in diphtheria. A few weeks ago a child was admitted under his care, in which the diagnosis was at first doubtful; but tracheotomy was performed without relief, and the enlargement of the glands behind the jaw pointed to diphtheria. After death some small patches of exudation were found on the fauces, beyond the reach of observation during life. Four days afterwards the sister of this patient was admitted with diphtheria, and died; while the nurse in charge of the two cases was attacked, and was only now convalescent. The nature of the membrane was of minor importance, for it differed widely in different cases of diphtheria. He had only examined after death one case of croup, in which death resulted from absolute choking by the false membrane; a tube of membrane was found confined to the larynx and trachea, the surface beneath being injected, but in other parts pallid and free from the vascularity correctly described by Dr. Duckworth as occurring in diphtheria.

Mr. **Parker**, in reply, pointed out that those parts nearest to the steam were least affected; and he could not accept Mr. Barwell's explanation of the formation of the membrane in the trachea from direct irritation. His case of laryngeal diphtheria following typhoid was acknowledged by all who saw it at the time to be diphtheria, although confined to the larynx, and the membrane being exceedingly tough and white. The early symptoms in this case were those of croup—*i.e.*, of catarrhal character; but he had seen cases of croup in which there was but little primary coryza. Diphtheria might occur without deposition of membrane, with merely coryza and reddened fauces. As to the sequelæ, evidence was wanting that paralysis was a necessary sequela of diphtheria; and it would hardly do to base the diagnosis of a disease upon its sequelæ, as had sometimes been done in diphtheria. Dropsy or perforation of intestine might be held to be distinctive of scarlatina or typhoid fever in this way, though very likely these sequelæ could be prevented by timely treatment. Thus no case of scarlet fever treated from its commencement in the Children's Hospital had led to dropsy; while those cases in which dropsy supervened were precisely those in which little or no treatment had been adopted; so also with typhoid fever. With regard to albuminuria, in one of the two undoubted cases of diphtheria he had mentioned there was much albumen; in the other, none. Was croup non-contagious? In the last case in the Children's Hospital for which tracheotomy had been performed with success some of the membrane was expectorated into the eye of the nurse in charge, producing violent inflammation. Nor was the amount of depression any diagnostic feature; and he repeated that he had never seen a case of sthenic croup in an impoverished child. The type, then, varied with the individual. There was no glandular swelling in the case of diphtheria following typhoid which he had related.

IN THE LABORATORY.

PILOCARPINE—THE ACTIVE PRINCIPLE OF JABORANDI.

Mr. A. W. Gerrard has communicated to the *Pharmaceutical Journal* that he has separated an alkaloid from jaborandi which is the active principle of the drug, and which he calls pilocarpine. Half a grain produced the full effects of jaborandi. The following is the mode of preparation:—

Prepare a soft extract either of leaf or bark with 50 per alcohol. Digest this with water, filter, and wash. Evaporate the filtrate to a soft extract, cautiously add ammonia in slight excess, shake well with chloroform, separate the chloroform solution and allow it to evaporate; the residue is the alkaloid pilocarpine with probably a small amount of impurity.

Besides the alkaloid, jaborandi contains an acrid resin, tannic acid, volatile oil, and chlorophyll. The acrid resin is soluble in ether, and possesses properties which indicate it to be the substance by which the effects of its external application are produced.

ALUM IN BREAD.

Mr. J. C. Thresh writes on this subject in *The Pharmaceutical Journal*, and gives the details of a new process which he has devised for the detection of alum in bread, and which he believes to combine accuracy with despatch. The following are the directions he gives for carrying out the process:—

"Take 1,250 grains of bread (from middle of loaf) or flour, and char thoroughly in a platinum dish or on foil over a gas lamp. Powder the char and mix it with sufficient pure strong hydrochloric acid to make a thin cream. Boil gently for a few minutes, then add about 100 c.c. of water, and continue the ebullition a few minutes longer. Dilute to 150 c.c., stir well and filter off 120 c.c., which will contain the aluminia from 1,000 grs. of the bread or flour. To this filtrate, add a slight excess of solution of ammonia, boil for a few seconds, then let the precipitate subside, and decant the supernatant fluid. Add boiling water to the sediment and again set aside to settle and decant the clear fluid. Pass the fluids through a small filter to collect any particles of the precipitate which may have been suspended therein, and throw the filtrate away. Now add to the partially washed precipitate about a gramme of pure caustic potash (or soda), warm and pass the solution through the same filter employed for the previously decanted fluids. Wash the filter with hot water, to which a little KHO may be added, and proceed to precipitate the aluminia in the filtrate by adding a few drops of dilute phosphoric acid and excess of pure acetic acid. Heat the solution and precipitate to the boiling point, and then wash the latter by decantation and filtration. Finally dry, ignite, and weigh. The weight of the resulting $AlPO_4$ in grammes multiplied by 400 will give the amount of ammonia alum in grains present in one pound of the bread or flour."

QUININE FOR HYPODERMIC INJECTIONS.

DR. P. JAILLARD (*Répertoire de Pharmacie*), alluding to the difficulties at present in the way of administering quinine hypodermically, suggests that they might be obviated by employing either an acid or neutral sulphovinate of quinine. He specially recommends the sulphovinate, which dissolves readily in water and in alcohol, and is insoluble in ether. An aqueous solution of the neutral sulphovinate (one pint in two of distilled water) keeps perfectly, he says, at ordinary temperatures. It does not exhibit the fluorescence so characteristic of the solution of the sulphate, has a bitter taste, and is alkaline to test paper.

A NEW THERMOMETRIC SCALE.

AT a recent meeting of the Chemical Society Mr. John Williams read a paper in which he proposed the adoption of a new thermometric scale. The scale he proposes is based upon the physical characters of mercury. Mr. Williams takes the freezing and boiling points of mercury as the limits of his scale, and divides the space between these points into 1,000 degrees. According to this scale the melting point of ice (0°C.=32°F.) is 100°, and the boiling point of water (100°C. =212°F.) is 350°. The alleged advantages of this milligrade scale, as it is termed, is the avoidance of fractions of degrees, and the abolition of minus degrees. These, no doubt, are advantages which are not to be despised; but we do not think that our whole thermometrical notation should be overturned for the sake of such questionable benefits. The notation is sufficiently confusing at present, with three scales in common use, and we do not think any simplicity is gained by adding one more. We don't see why we should be bothered with one more scale simply to oblige those people who can't understand the present scales. For scientific purposes the centigrade is best, and we hope it will eventually supersede the Fahrenheit scale for clinical purposes. Meanwhile, to have one more is "confusion worse confounded."

NOTES, NEWS, AND GOSSIP.

THE *Pacific Medical Journal* says that in San Francisco the sex of five children in utero was recently determined by auscultating the fœtal heart. The children were all pronounced girls, but they all turned out boys. The *Detroit Review* reports a similar experience in the practice of a physician in Detroit.

NEW AIDS TO DIAGNOSIS.

AT Rome a conference of the medical clinic of the University was held on the 18th of April to hear Dr. Collongues explain the mechanism and working of three new instruments devised by him, and entitled the pneumoscope, the dynamoscope, and the bioscope, which promise to be of considerable use in the practice of medicine. With the pneumoscope are produced artificially all the abnormal murmurs proceeding from the respiratory organs in a state of disease; with the dynamoscope may be determined the scale of all the sounds which are made at the digital extremities by the continuous movement of the tissues; while the bioscope registers with precision the heat, the electricity, and the functional activity of the skin. Prof. Baccelli and others of the medical faculty of Rome expressed themselves highly pleased with Dr. Collongues" inventions, which will soon be made known to the professional world.—*Lancet.*

A PRIMIPARA AT FORTY-EIGHT.

DR. WURZBURGER (*Allg. Med. Central-Zeitung*) reports the following singular case:—

A strong hearty woman of 48, married for years, became pregnant for the first time, and was delivered of a large-sized girl. She did not suspect her condition (attributing the cessation of menstruation to the climacteric period) until the pains became severe, and the physician in attendance was compelled to use forceps in delivery. There was no enlargement of the breasts, and no secretion of milk, but the puerperal week was passed normally.

MEDICAL EDUCATION OF WOMEN IN INDIA.

WE notice in the *Madras Mail* that the Indian Government is desirous of giving every encouragement to ladies to study for a medical degree, in which case they must attend the full curriculum of prescribed studies. When the ladies themselves prefer the more limited and practical course of study, recommended by Dr. Furnell, arrangements may be made accordingly, and, on the completion of this course of study, certificates may be given by the college authorities of the degree of proficiency acquired in each subject. The division of the course of study which Dr. Furnell recommends is approved, and the Government fully concur with the Surgeon-General and with Dr. Furnell that, with the exceptions specified, ladies desirous of becoming doctors must be prepared to attend the courses of lectures with male students. The Government understands that the exceptional classes are obstetrics and surgery, and one or two lectures in anatomy and physiology. By the adoption of the arrangement proposed by Dr. Balfour, of allowing the ladies to attend the lectures given at the Lying-in Hospital by the warrant medical officer to pupil midwives, it would appear that no additional expense need be incurred on account of midwifery lectures. The Surgeon-General will report the expense which will be incurred for pro-collegiate training, and for separate lectures in surgery, anatomy, and physiology, during the course of three years' study referred to above. The expense involved in the case of any of the ladies determining to study for the degree of M.D. should also be stated.

No fees will at present be required from any lady students. This is a marvellous fact. In England, women who desire to study medicine are charged at least double that which men have to pay; but in India they are welcomed, and no charge is to be made.

THE *Pacific Medical and Surgical Journal* has the following:—"'Visitation of God' is the cause of a large number of deaths in Charleston, S. C., according to the health reports. It is gratifying to learn that God is on a visit to that region of country." Is that a "Pacific" hit?

EFFICIENCY OF MINERAL WATER IN REDUCING AND ADDING FAT.

PERLET, the well-known actor, whose leanness is described as "something phenomenal," naturally desiring to get "some flesh on his bones," a well-known physician of Paris advised him to go to one of the bathing-places in the Pyrenees. Perlet accordingly went off to the prescribed locality, where he drank and bathed with the utmost zeal and perseverance. But neither drinking nor bathing seemed to have any effect upon him, and he remained just as much a skeleton as before. "Patience!" urged the local doctor, in reply to his expressions of disappointment; "there is nothing like the water of our springs for making people fat!" Soon after Perlet was patiently soaking himself in a bath, and heard a colloquy in the bathing cabinet next his own between the local Æsculapius and a lady of enormous obesity. "Doctor," remarked the lady, "I am really losing heart and patience." "Why so?" inquired the doctor. "Because, though I have been taking these waters regularly for two months, I am not one ounce lighter!" "Patience, madam!" said the doctor, in his most persuasive tones, "*there is nothing like the water of our springs for making people thin!*"

NEW DISEASE IN BALLET-GIRLS.

At a meeting of the Society of Physicians in Vienna, reported in the *Wiener Medizinische Presse*, Dr. Schulz described a new form of disease which hitherto he had observed only in ballet-girls, and which manifested itself in a cramp of the muscles of the calf of the leg. It occurred chiefly among those who were in the habit of performing a *pas seul* on the points of the toes. The disease appeared to be similar in its character to writer's palsy. The muscle which is the chief agent in supporting the body upon the points of the toes is the flexor longus pollicis. This position, which is accompanied by a rigidity of the whole limb, can only be maintained when the foot is supported by a shoe made for this particular purpose. This muscular cramp was relieved in all cases by faradization. Professor Patruban, in reply to this communication, stated that in his opinion it was "anatomically, physiologically, physically, and artistically" impossible that a dancer should stand upon the points of the toes; but that the sesamoid bone was the point of support. In proof of this view he referred to Hyrtl's lectures, and to the fact that Dr. Schulz had never had an opportunity to see the naked foot in this position.—*Boston Medical and Surgical Journal.*

AMPUTATION OF THE SPLEEN.

Pietrzycki in the *Przeglad lekarski* records the case of a peasant girl, aged 23, from a wound in whose left hypochondrium he found a fleshy tumour three inches wide and four long extending. It presented the appearance externally of the spleen. The general bodily condition was good. After making several futile attempts at replacing it he surrounded the pedicle with a strong ligature, and after the amputation found two small vessels which it was necessary to tie. The wound was then closed, no peritoneal symptoms were manifested, and in fifteen days complete recovery had taken place.—*Allg. Wien. Med. Zeit.*, Feb. 9, '75.—*The Clinic.*

CANCER FROM A CLINICAL STANDPOINT.

The following conclusions are drawn by Prof. Nussbaum (*Müncherer ärztlich. Intell. Blatt*): 1. Cancer is a hyperplasia of the epithelium which extends toward, and crowds upon the connective tissue, produces ulceration on very slight irritation, debilitates the person by hæmorrhages and ichorous discharges, and finally its particles extending throughout the entire body, causes similar growths and destructive changes in other organs and subsequent death. 2. Amongst its causes we must reckon advanced age, mental anxiety, and grief; besides this all those tissues (as warts, cicatrices, &c.), which occupy an immediate position between epithelium and connective tissue predispose to it; finally those parts which are often irritated but in which no acute inflammation has occurred, are frequently attacked. Cancer is not hereditary, and is not contagious. In the beginning it is a purely local affection, and becomes a dyscrasia only after extension. 3. Humoral infection is to be distinguished from the cancerous dyscrasia. The former may entirely disappear and never contraindicate an operation. 4. The recurrence of cancer is either continuous, as when the elements have not been entirely removed; or regular, if the neighbouring morbid tissues be disposed to the formation, or when some of the particles have been carried through the circulating medium to a distant part of the body. 5. Cancer is radically curable by an early and extensive operation. 6. According to carefully computed statistics, patients who have been operated upon live considerably longer than those in whom this procedure has been omitted. 7. All remedies acting on the tissues, on the nerves, and blood should be considered in deciding upon treatment. First in rank, we place an extended operation. Caustics are often useful, especially after removal of the growth. Iodine, arsenic, and condurango are all valuable for internal administration. We have derived decided benefit from parenchymatous injections. Disinfectants and narcotics are often indispensable agents.—*Allg. Wiener Med. Zeitung.*

OBITUARY.

Brereton.—On the 25th April, at her residence, 13 Harcourt Street, Dublin, Margaret, widow of the late David Brereton, A.M., M.D.

Crotty.—On the 29th April, Richard S. Crotty, L.R.C.P.Ed., of Liverpool, aged 35.

Evans.—On the 20th April, D. P. Evans, M.B., of Belper, aged 53.

Fryer.—On the 27th March, at Prospect House, Trowbridge, Thomas Fryer, M.R.C.S.E.

Furnival.—On the 21st May, at Hill House, Great Bentley, Essex, and late of 16 Grafton Square, Clapham, William Henry Furnival, M.R.C.S.E., L.S.A., aged 87. Friends will please accept this intimation.

Giles.—On the 17th April, at High Street, Stourbridge, Francis Giles, M.R.C.S.E., aged 55.

Gill.—On the 24th April, at Belper, Geo. Gill, Surgeon, aged 56.

Hammond.—On the 27th April, at Pitt Street, Edinburgh, William Hammond, M.D.

Harrison.—On the 6th May, at Woodbine Street, Westoe, Colpitts Harrison, L.S.A.L., aged 64.

Hey.—On the 10th May, at Gledhow Wood, Leeds, William Hey, F.R.C.S.E., aged 78.

Horton.—On the 12th May, at Meanwood, near Leeds, Richard G. Horton, M.R.C.S.E., aged 69.

Huston.—On the 11th May, at his residence, Tynan, co. Armagh, Chas. Todd Huston, M.D., aged 50.

Kavanaugh.—On the 30th April, Michael T. Kavanaugh, L.R.C.P.Ed., L.S.A., of Jamaica Road, Bermondsey, in his 27th year.

Lang.—On the 25th April, at Fawcett Street, Sunderland, John Lang, Surgeon, aged 78.

M'Dermott.—On the 10th May, John M'Dermott, M.D., of Shrewsbury Road, Westbourne Park, aged 78.

MacSwinney.—On the 1st May, James MacSwinney, L.A.H.D., of Galway, aged 64.

Moore.—On the 15th May, at Brixton Road, S.W., S. W. Moore, F.C.S., &c., late Lecturer and Demonstrator on Physiological Chemistry at St. George's Hospital, agen 27.

Newman.—On the 4th May, at New John Street West, Birmingham A. S. Newman, M.R.C.S.E.

Norman.—On the 22nd March, at Rio de Janeiro, Hugh Norman, L.K.Q.C.P.I., Medical Officer S.S. *Memnon*, aged 28.

Oakley.—On the 17th April, at Northampton, Charles Oakley, L.R.C.P.Ed., of Shrewsbury.

Peter.—On the 7th May, at his residence, Longford, David Chamney Peter, M.D., Surgeon Royal Longford Rifles.

Rankine.—On the 21st April, at Porchester Terrace, Islington, Robert Rankine, M.R.C.S.E., aged 80.

Shannon.—At Monaco, France, George Shannon, M.D., of Wigton, Cumberland.

Sharpe.—On the 3rd May, at Wilton Street, Liverpool, Robert Sharpe, M.D., aged 47.

Shea.—On the 19th May, at his residence, 28 Capel Street, Dublin, John Shea, M.D.

Sturkey.—On the 6th April, Henry G. Sturkey, L.R.C.P.Ed., of Highworth, aged 51.

Ridley.—On the 3rd May, at his residence, Moore Hall, Tullamore, King's County, John Ridley, M.D., aged 59.

Webber.—On the 12th May, Wm. Webber, F.R.C.S., formerly of Norfolk (Founder of the Royal Free Hospital for Incurables at Norwich), in his 76th year.

Whicher.—On the 18th April, at Landport, Jas. Whicher, M.R.C.S.E., aged 86.

Wilkinson.—On the 25th April, John Wilkinson, M.R.C.S.E., of Charlotte Street, Hull.

Willan.—On the 17th April, at Westoe, James R. Willan, L.F.P. & S. Glas., aged 33.

Wyman.—On the 8th April, Geo. Wyman, M.R.C.S.E., of Alcester, aged 64.

TO CORRESPONDENTS.

⁂ We beg to thank those gentlemen who have, during the past, kindly furnished us with abstracts of their lectures, communications to societies, contributions to journals or other productions, and to say that such abstracts will always receive attention.

⁂ Correspondents are requested to write legibly, and on one side of the paper only.

☞ Books for review, exchange journals, and literary communications to be addressed to the Editor of The Doctor, at the Office 20 King William Street, Strand, London, W.C.

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THE DOCTOR.

LONDON, JULY 1, 1875.

Multum in parvo.

THE MEETING OF THE MEDICAL COUNCIL.

THE meeting of the General Council of Medical Education and Registration this year has just taken place, and is, we fancy, little calculated to increase the confidence of the profession in its value. In his opening address the President made the significant admission that "we (the Council) have only lately made our tools and sharpened them for their work." Considering that the Council was created in 1858 and has met every year since at an expense of many thousands of pounds, this is, to say the least, some justification of those ardent medical reformers who have pronounced it a mere talking body, and declared their conviction that its constitution ought to be remodelled.

Only a third of the original members now have a seat on the Council, and we often hear it hinted that the ablest men who have left it look upon it as of little use. It may, however, be urged that the Register of qualified practitioners has been kept, a national Pharmacopœia issued, the examinations of the licensing bodies visited, their conjoint action urged, and many useful recommendations made. Having very restricted powers, the Council has been slow to act, and even its recommendations have often been made with hesitation, if not with fear. Where disagreeable, they have therefore been unheeded. A little more assumption of authority, a resolute use of all the power it has would probably have brought recalcitrant bodies to their senses. If not, further powers might have been sought. But the Council has always appeared unwilling to seek fresh power. It has, in fact, hesitated to use the authority it possesses, and actually deprecated the acceptance of further responsibility.

At the very opening of the session the reluctance of the Council to increase its sphere of action was very aptly illustrated. A letter addressed by the President to the Home Secretary was read, in which the opinion formed in 1859, that it is not the function of the Council to prosecute offenders under the Act, was calmly reiterated, and it was further urged that the Council should not be required to undertake such duties. The reasons given by the President are plausible, but by no means conclusive; and we venture to assert that a considerable portion of the profession will feel dissatisfied on this point. The corporations were glad to possess penal powers, and found means to use them; and many will think that the Council should be willing to assume them.

The Reports of the Visitors of Examinations gave rise to protracted discussions on a number of points of the utmost interest, and some of the speeches will, we doubt not, produce a lasting impression. Free interchange of opinion on such burning questions cannot but be a gain. It is of little real importance which institutions come in for censure, as most of them will be ready to remedy all the defects discovered. The Universities of St. Andrews and Durham, however, had better haste to put their houses in order. The latter is especially in danger of professional contempt. It does not grant degrees without residence, and yet has conferred its M.D. on a candidate deficient in English spelling! As to St. Andrews, it can only confer ten degrees yearly on practitioners over 40 years of age. The restriction as to age is ridiculous, and that as to number has been freely discussed during the last year.

The Government having requested the opinion of the Council respecting the admission of women to the profession, the subject was discussed in a debate of great length, which only concluded on the last day of the session—Saturday, the 26th ult. The resolution adopted very aptly illustrates the indisposition of the Council to come to any decision, on which we have commented. It is an exact expression of the reluctance to act and the willingness to talk, which is as characteristic of the Council as it is of Mr. Disraeli's Government, and as such should be heartily welcomed by our rulers. We can scarcely object to this, since it leaves things just as they were, reflects the opinion, we believe, of the majority of the profession, that medicine is not a suitable vocation for women, and yet declines to take any step towards the exclusion of the few who are determined to enter it. The following are the words of the resolution ultimately adopted:—

"The Medical Council are of opinion that the study and practice of medicine and surgery, instead of affording a field of exertion well fitted for women, do, on the contrary, present special difficulties which cannot be safely disregarded; but the Council are not prepared to say that women ought to be excluded from the profession."

The question of registering foreign degrees was adjourned until next year, the Conjoint Schemes were mentioned, but not discussed, and judicial, financial, and other business filled up the ten days' session of the Medical Council just concluded.

CHRONICLE.

ERYTHEMA NODOSUM.

Dr. H. S. Purdon writes thus regarding Erythema Nodosum, a disease the pathology of which is as yet little understood, in his new work, (*a*) lately reviewed in The Doctor, and which contains much practical information.

"I have had frequent opportunities of observing this complaint at the Belfast Hospital for Diseases of the Skin, and there are two points to which I think attention may be directed :—1st, as regards its forming one of the varieties of erythema ; and 2nd, as regards its treatment. Mr. Hutchinson, a no mean authority on dermatological matters, looks on erythema nodosum as an 'abortive exanthem ;' but I, for my part, believe that its classification with hæmorrhages would be more correct. Now, hæmorrhagic affections of the skin are peculiar to the cutis, for although the blood be effused amongst the epidermic cells, still hæmorrhages cannot—originally, at least—constitute an epidermic affection ; whilst erythema is a superficial inflammation of the skin, not affecting the subcutaneous tissue, except in that variety which is the commencement of one of the forms of eczema. In erythema nodosum, which is ushered in by febrile symptoms, neuralgic pains in the limbs, &c., the protuberances most frequently seen parallel to the tibia are due to hæmorrhage, the centre of each oval node-like patch being filled with blood. Dr. Bohn regards erythema nodosum as the same affection as peliosis rheumatica, each protuberance representing an inflammatory infiltration arising from embolism of the cutaneous capillaries. Moreover, there is in the first instance œdema of a cluster of capillary loops. The subsequent extravasation of blood may occur in either of two ways—viz., either from rupture of the vessels, or from escape of blood corpuscles, without rupture. The latter is the most recent theory regarding certain forms of extravasation of blood into the tissue of the cutis, as held by German observers. The peculiar shades of colour seen in the patch of erythema, from faint red at first to yellow and green, are due to this effused blood ; and Neumann thinks that the transformation of the hæmatosine of the extravasated blood, which either remains in the blood corpuscles as minute aggregations producing reddish-brown maculæ on the skin, or hæmatoidin crystals are formed, which produces varied pigmentation. Thus, 'of all the inflammatory diseases of the skin, erythema nodosum produces the most remarkable hæmorrhage, each wheal-like elevation, characteristic of this disease, having in its centre a hollow filled with blood.'

"The lower extremities are not always the seat of erythema nodosum ; the arms, for instance, are occasionally attacked. Probably vaso-motor nerve derangement is an important factor in causing this disease, which usually appears in delicate, pale, thin, and anæmic young girls, often accompanied by chlorosis. Now, all causes of debility tend to perverted innervation. Moreover, the disease under notice (erythema nodosum) has been observed associated with chorea. In addition to the hæmorrhage already mentioned, Neumann believes that in erythema nodosum there is—first, œdema of the superficial layers of the cutis, the eruption being then colourless. The disease is sometimes chronic ; and, according to the same author, in cases where the œdema occurs on the extensor surface of the knee-joint, it may be confounded with serous effusion into that joint, especially where the œdema fills up the hollows on either side of the patella.

"There is one complication of erythema nodosum which is very rare, and that is denied by nearly all dermatologists—Hebra amongst them—namely, ulceration. I have recorded in the editorial commentary of the *Journal of Cutaneous Medicine*, when under my management, a case of a female millworker, in whom there was no trace of syphilis, and in which several of the protuberances suppurated, leaving painful ulcers. The only author, I believe, who agrees with me is Hardy, of St. Louis Hospital, Paris, who states that if the patient is of a scrofulous constitution, the erythematous protuberances may ulcerate, producing sores like syphilitic ones."

OREZZA WATER.

The use of natural waters is (*Medical Press and Circular*, April 28th, 1875) becoming more common in England. On the Continent it is well known that they have long occupied a more prominent place in therapeutics than with us. Chalybeate waters have perhaps been less patronised by British practitioners than have saline and purgative waters. And yet it is well known to those who have fairly tried them that they often do good when all the pharmaceutical preparations of iron fail. Moreover, when these medicines cannot be tolerated, and yet iron is indicated, mineral waters containing the remedy may often be taken with great benefit. One of the best of these is Orezza water, which, though familiar enough to us in France and Italy, has hitherto not been in the English market. We are therefore glad to learn that the valuable Corsican water will henceforth be kept in stock by the Vichy Waters Company. Besides being one of the strongest natural chalybeate waters, it is agreeable to the palate, in consequence of the large quantity of carbonic acid it contains. Orezza water may be looked upon as a sort of natural ferruginous seltzer water, and as such its numerous uses will at once suggest themselves to our readers.

WINTER CLIMATES.

Dr. Marcet, F.R.S., has contributed three articles to the *British Medical Journal*, in which he contrasts the effect of residence on the Mediterranean shore and the hills beyond. His conclusions are—

1. The state of the vital power left in the patient is to be carefully ascertained.

a. If the vital power, although at a low standard, do not appear to be declining, and if the case be decidedly chronic, benefit may be expected from a winter's residence near the Mediterranean coast, on the sea-level, in a warm sheltered spot.

b. If the vital power be declining rapidly, although perhaps the affection may not be of long standing, it is questionable whether the South will arrest this downward progress. The air of the hills near the Mediterranean may check the evil for a time—say, perhaps, for half or two-thirds of the winter season ; but the disease is not unlikely after that period to resume its ascendancy.

c. If the vital power should keep up well, although the disease be attended with a quick pulse and high temperature, together with progressing pulmonary mischief, a decided benefit is to be expected to result from one or more winter seasons spent on the Mediterranean coast, the hilly country, or high ground, near the sea being selected for the first period of the residence in the South.

2. The condition of the lungs of the patient, as determined by the physical signs of the chest, should be taken into consideration.

a. Patients with consolidation at one apex, although unattended with apparent ill-health, do well to winter in the South as a means of precaution ; but such persons should be very careful to regulate strictly their mode of living abroad.

b. Patients with a hæmorrhagic tendency, and exhibiting a little more than harsh respiratory murmur and debility, usually progress favourably on the hills near the Mediterranean coast. They should be careful not to take up their residence near the sea or at the sea-level, and to leave the South early in the spring, before the warm weather sets in.

c. Patients, with softening and cavities sometimes derive much benefit from wintering in the South. The state of their vital powers should be considered as a guide towards a decision being taken with respect to autumnal movements.

(*a*) "A Treatise on Cutaneous Medicine and Diseases of the Skin." Bailliere, Tindall, and Cox, 20 King William Street, Strand. 1875.

CHLOROFORM AND NITRITE OF AMYL.

In our last issue we reported the effects observed by Mr. Bader. Schüller had previously made similar observations, as reported in the *Medical Times and Gazette* (Dec. 12, 1874). We now find that Dr. F. A. Burrall, of New York, preceded these gentlemen. In the *New York Medical Record* of May 22 he writes as follows :—

"Whether nitrite of amyl has been used to avert the dangers from chloroform in man I do not know, but it has long seemed to me, from *à priori* reasoning, to be indicated under such circumstances, and in a short paper on the nitrite of amyl which I sent to the *New York Medical Gazette* of June 11th, 1870, I recommended its use in the following words : '*It would seem worthy of a trial in, the threatened syncope from chloroform, since the inhalation of but a few drops is followed by marked acceleration of the heart and flushing of the face.*' In my own practice I have never had an opportunity of making the trial, but with this stronger light of recent investigations should consider it more than ever a duty to do so.

"Evidently, with these experiments of Dr. Schüller before us, science now demands that *whenever chloroform is administered, the nitrite of amyl should be at hand as one of the agents to be employed in case of impending danger.*"

LOCALISATIONS IN CEREBRAL DISEASES.

Dr. Charcot (*Le Progrès Méd.*, May 8), in a lecture at the Faculté de Médecine, observes that the structure of the grey matter of the brain, in whatever region of the hemispheres we examine it, presents some general characters. We may say that all parts of the grey matter are composed of the same essential elements. Doubtless each of these elements may offer, according to the region observed, important deviations from the normal type ; but in the regional study of the structure of the grey substance we must take great account also of the varieties in the mode of acting of these elements.

After examining these elements separately, we shall see how they unite to form the grey parts of the brain. Our description will naturally commence by the elements which, without contestation, play the fundamental part—I refer to the ganglion cells, which are the characteristic elements of the region ; these are habitually denominated pyramidal cells.

Permit me, gentlemen, to remind you, in my introduction, of the principal facts in the constitution of one of these elements of nerve-cells, the study of which is best known at this moment ; I allude to the nerve-cells of the anterior cornua of the grey substance of the spinal cord, called also motor cells. These motor cells are without distinct membrane, and their dimensions do not much differ from five-hundredths of a millimetre. Their form is more or less globular, rarely elongated. Their body is constituted by a protoplasm which appears crenated when the cell is looked at after death ; but in serum, or after the action of osmic acid upon a fresh cell, the body appears to be composed of a transparent protoplasm, in the midst of which these exist, as Schultze has shown, numerous fibrils. These, by cadaveric alteration, undergo granular degeneration. There is in the cell an ovular nucleus and a shining nucleolus. Lastly, I would point out also on the protoplasm the habitual presence, even in physiological conditions, of brown pigmentary granulations.

But one of the most important peculiarities of these cells is that they are studded over by numerous prolongations, which, at the moment when they are detached from the cell, show a voluminous trunk, which becomes smaller as it undergoes dichotomic division. The last of these ramifications are very fine, and it is difficult to follow them very far. M. Gerlach, from preparations with chloride of gold, assures us that these ramifications terminate in a kind of anastomotic net-work. These prolongations are composed also, like the cell itself, of a granular protoplasm and long parallel filaments, which may be followed into the centre of the cell. They are called prolongations of the protoplasm, to distinguish them from another kind of prolongation.

A German histologist, Deiters, has discovered, some years ago, an important fact, verified since his day by all anatomists. It consists in this, that the majority of motor cells, perhaps all, possess, besides the prolongations we have alluded to, one prolongation for each cell, which is different from all the others. This bears the name of nerve prolongation, and you are about to see immediately the reason of that qualification. It is detached from the body of the cell or from one of its prolongations which is the largest, under the form of a very fine filament, which gradually becomes more voluminous. This prolongation does not ramify at all, and is less vividly coloured by carmine than the prolongations of the protoplasm.

Lastly, if we succeed in following it far enough, we see it becomes covered like an ordinary nerve with myeline, so that it may be considered at its origin as a cylinder axis, and, at a certain distance, as a complete nerve. The connection of the nerve-cells by means of this prolongation with the tubes of the medullary substance is then not doubtful.

The cells of the grey envelope of the brain present very variable dimensions. There are some very small in comparison to the others, and these are the more numerous. These pyramidal cells have an average size of one-hundredth of a millimetre. Those of the larger size occupy ordinarily the inferior layer of the stratum of cells, and their diameter is twice as great. Lastly, there are giant cells, which are met with in special regions, and which are five times as large as the smaller ones in their diameter.

The constitution, however, of all the pyramidal cells seems to be the same. Their shape resembles that of a pyramid more or less elongated. The body of the cell reminds us of the fibrillary structure above mentioned. The nucleus, according to many authors, is angular, and in some sort reproduces the general form of the cell. The nucleolus has no peculiar feature.

The cellular prolongations present peculiarities of interest. One of them may be named the pyramidal prolongation, for it continues, as we may say, the body of the cell, becoming gradually finer. It throws off in its course some lateral prolongations, and divides sometimes like a fork at its extremity, which is always directed towards the surface of the convolution. It results from this direction that the cell is so situated that its base is parallel to the interior border of the grey zone.

Other prolongations of the same category set off from the angles on the base. The former ramify so as to remind us of the prolongations of protoplasm of the spinal motor cells. These prolongations may perhaps become resolved in the grey zone, as M. Gerlach says is the case in the spinal cells.

But, gentlemen, there exists certainly for the pyramidal cells of the largest size a special prolongation analogous to the cylindrical prolongation of the spinal motor cells. This is, in one case as in the other, a filament which is fine at its origin and which then gradually thickens slightly. In fortunate cases it is possible to observe at a certain distance from the cell this prolongation becomes covered with myeline. Our observer has placed this point out of doubt by acting on the cellules of the anterior lobes of a man who had succumbed to encephalitis, and, since the publication of his work, the truth of his assertion has been often confirmed. This basal prolongation is always directed towards the medullary substance of the convolutions.

All these explanations show how impossible it is to mistake the analogies which on the one hand bring together the pyramidal cells of the grey zone—at any rate, the large cells and the giant cells—and on the other hand, the motor cells of the anterior cornua, and these analogies, already forseen by M. Luys, we shall have to take into consideration again.

The pyramidal cells are not the only elements of cellular nature met with in the grey zone. There are also certain small cellular elements having a globular form, and which are rarely pyramidal, sometimes bristling with prolongations, disseminated on all parts, or sometimes composing a rather dense layer. Different authors look on them as nervous elements incompletely developed; others deny that they possess this character, and compare them with the elements which constitute the granular zone of the retina.

M. Regnert also admits among the nerve elements certain cortical zones, with lengthened cells, which are generally fusiform, and which, in certain parts, compose a fifth layer. These cells have generally their axes directed parallel to the fibres of the system of association constituted by medullary fibres which unite one convolution to the other in its neighbourhood.

REMOVAL OF THE OS COCCYGIS FOR COCCYODYNIA.

Dr. Irish, of Lowell (*Boston Med. and S. J.*, May 27), mentions the case of an unmarried woman, æt. 44, who fell with some force on the coccyx. The injury was immediately attended with great pain in the vicinity of the bone, which, however, somewhat subsided in a few weeks. Four years after, while engaged in her usual occupation, she began to suffer from neuralgia affecting all the pelvic organs, but especially the anus and rectum. The pain was aggravated by sitting, and defæcation was attended by much suffering. Menstruation was regular and normal, but attended by severe neuralgia referred to the rectum. Various physicians to whom she applied could afford her but slight and temporary relief. Dr. Burnham found extreme tenderness over the coccyx, and the two lower segments of that bone displaced and directed anteriorly at a right angle to the rest of the bone, and pressing on the rectum. The uterus was retroverted. The patient suffered from severe neuralgic pain, greatly increased by sitting or walking. Patient being on her left side and etherised, Dr. Burnham made an incision two inches in length along the middle line, and carefully dissected off the attachments of muscles and ligaments, carrying the knife close to the bone. The lower part of the bone was then removed by the bone forceps, and then the remaining muscular attachments as far as the cornua were detached with scissors. Very little hæmorrhage occurred. For two weeks there was great discharge from the wound, but that ceased in six weeks. The bowels were maintained constipated for six days with opium. The effect was complete cure of the coccyodynia. The operation seems a severe one for such an affection.

DIAGNOSIS OF BLOOD STAINS.

We have already reported the attempt of Dr. Joseph G. Richardson, of Philadelphia, to distinguish the blood of man from that of other animals. Dr. J. J. Woodward, of the United States Army, has entered into a lengthy criticism of all the known facts, and concludes (*American Journal of Medical Sciences*) that neither by the microscope nor by any other means yet known can the expert determine that a given stain is composed of human blood and could not have been derived from any other source.

In an explanatory note in the same quarterly, Dr. Richardson admits this, but says it is not the whole truth, because it often happens that "*evidence other than microscopical* narrows down the conditions of a case to the question—Is this stain human blood or that of an ox, pig, or sheep?" He mentioned the doubtful cases in his first paper, but intentionally in a manner to prevent the information serving criminals. He now says we cannot distinguish human blood corpuscles from those of mammals, which measure on an average over 1-4000th of an inch. Of these the dog is most important.

CASE OF APHASIA.

Dr. Balzer, interne des hopitaux, in a communication to the Société Anatomique of Paris, presided over by Dr. Charcot (*Le Progrès Méd.*), mentions the case of a woman, æt. 62, born at Paris, and who had no profession, who entered the Salpetrière seven years back, and had been several times in the infirmary of that institution. Latterly she had always presented an air of astonishment, and had been timid and lisping when she spoke. According to information, she had been frequently addicted to drinking, and had even been conveyed to the Salpetrière in a drunken condition. Although she had been for some time affected by trembling, her powers of locomotion and other movements were pretty well executed.

On the 29th August, 1874, she was taken with a second attack of apoplectiform character, and had loss of consciousness, vomiting, involuntary stools, and was brought into hospital. Next day she was found lying on her back. She could move her limbs, but her face was red, she had an astonished air, but had recovered consciousness, but could not speak, and appeared to have some difficulty in moving her lips.

During the following days she recovered her speech a little, but pronounced words with difficulty, and in a low voice; her face preserved an air of immobility. She was easily frightened when interrogated, and if the questions were pressed she made signs that she could not speak, and manifested her impatience by twisting the coverlid or the objects on the bed. She was very emotional, and easily made to weep. When an object was placed before her, for instance a glass, she ended in naming it after several attempts. If immediately afterwards another object, for instance, a fork, were shown to her, she continued to pronounce the word glass, until it was remarked to her that she was wrong; then, after a new series of attempts, she finished by pronouncing the true word. It sometimes happened that three attempts remained fruitless, and she then testified impatience and discouragement. Her intelligence did not appear affected; she understood what was said, and acted in a reasonable way, She did not attempt to rise to walk through the ward. The trembling of the limbs was always rather intense. The right side of the body is notably weaker than the left. Nevertheless, almost every day she is made to walk about the wards, and can do so without help. She has had no epileptiform seizures either before or during her stay in the infirmary. Sensation was preserved, and appetite and sleep were regular.

In the twelve last days there was noted sadness and profound weakness; the patient fell when she attempted to rise to satisfy her necessities. It even happened to her one evening to fall from her bed, and this produced violent contusions in several places on her face. She can scarcely retain her saliva, and dribbles slightly; she cannot protrude the tongue, In the last two days only she vomited all she had to eat. Death supervened on 17th November, 1874.

At the post-mortem examination, at the opening of the skull, the dura mater being incised, it was found to be detached with facility, but it brought away with it fragments of a tumour which was seen near the falx cerebri and anterior part of the left hemisphere. This tumour, which was of the volume of a large egg, was broader at its base, which plunged into the convolutions, than at its point of adhesion to the dura mater. The pia mater did not adhere to the tumour; it enveloped it on every side, and was continuous until the level of its pedicle with that which covered the convolutions. Examined by the microscope, the pia mater did not present any alteration. The dura mater was thinned at the level of the insertion of the tumour.

The tumour compressed the convolutions of the left frontal convolution; it had hollowed out a space for itself, which was formed in front and below by the third convolution, and pushed back the fissure of Sylvius, and the neighbouring convolutions. The right hemisphere was pushed back. On section it is seen that the optic thalamus

[illegible]

and principally the corpus striatum of the left side have a less volume than the same organs of the opposite side. The convolutions compressed by the tumour are not softened, but only flattened, and much atrophied. The other parts of the encephalon do not show other alterations.

On cutting the tumour in two, there was seen on the violet base some greyish points, which presented a granite-like aspect on section. The tumour was very soft ; it became deformed and fell to pieces with the greatest facility. The section was sharp enough, and no liquid flowed from it. The cells, examined under the microscope, after scraping the part, were fusiform and much developed. They had a slightly granular protoplasm, and one or more nuclei were remarked in their interior, strongly coloured by carmine. Their prolongations, which were very long and narrow, frequently lay end to end and appeared continuous with each other. Section made after hardening the tumour by picric acid, gum, and alcohol, presented a fasciculated appearance. Between the fibres of the cells there were seen a great number of vessels without a proper wall or determinate direction. Some of these vessels had irregular and anfractuous dilatations, which were sometimes considerable, and filled with blood-globules.

HEART DISEASES.

~~Writing in the~~ *Lancet* on the treatment of primary diseases of the heart, ~~Dr. J. Milner~~ Fothergill suggests that

1. It is of the utmost importance in the treatment of primary disease of the heart to reduce to a minimum the calls upon that organ. Consequently light labour alone must be attempted ; and rest in bed is often very desirable at the commencement of a course of treatment, as well as at intervals afterwards.

2. Frequently much relief can be afforded when dropsy is present by unloading the distended venous system. Brisk catharsis gives great relief, and does not depress the patient.

3. In all cases the heart must be acted upon directly by agents which increase the vigour of the ventricular contractions, of which digitalis is the chief. This agent may be given uninterruptedly for years without any so-called cumulative action, if the cases are properly selected. If given in improper cases unpleasant consequences may follow its administration.

4. It is also very desirable that the nutrition of the heart be maintained by good food and iron in addition to the means mentioned above. Improvement in the general condition facilitates the action of the special remedies.

Dr. Fothergill thinks that by a combination of these measures, adapted to the wants of each individual case, much may be done in cases of primary disease of the heart.

EXTROPHY OF THE BLADDER.

In the *Pacific Medical and Surgical Journal*, Dr. Q. C. Smith reports a case of extrophy of the bladder, the patient being a female child, about 2½ years of age. As the case is almost unique, we quote Dr. Smith's account of it :—

"The patient is rather small for her age, but well formed in every part except the deformity before mentioned, quite intelligent, and her general health has been alwaye good. The bladder appears in the proper region, but external to the abdominal walls, in the form of an oval tumour, somewhat flattened antero-posteriorly, about three-fourths of an inch in diameter laterally, and about one and a fourth inches in diameter longitudinally. From the upper part of the base of the bladder, on each lateral side, the labia originate, in rudimentary form, and extend posteriorily quite to the verge of the anus, without coalescing behind, forming a small groove through which the urine constantly drains. The mouths of the ureters appear as small elevated projections on each lateral side of the bladder. From the patent mouths of the ureters, the urine constantly oozes. We could detect no vagina."

Dr. S. says the parts surrounding the bladder are usually kept unnaturally red, but not painfully sore, the urine only acquiring excoriating properties when the patient is unwell. The surface of the bladder he found to be of a bright red colour and covered with a mucous membrane. The common integument around and near the bladder had somewhat the appearance of mucous membrane, both in texture and colour.

As to treatment, Dr. S. does not think any operative procedure was admissible, although previous to his being called in another medical man had strongly advised that an operation should be performed for the purpose of replacing the bladder within the cavity of the abdomen. Dr. S. suggests that the instrument maker may be able to do something to render the patient comfortable. As a local application, to relieve the excoriations that sometimes occurred, Dr. S. found a mixture of subnitrate of bismuth with glycerine to answer better than anything. Internally, he gave a combination of balsam copaiva, borax, and potassium acetate, which he thought seemed to modify the excoriating property of the urine.

writes

THE TREATMENT OF DIARRHŒA.

Dr. Hartzen (*Virchow's Archives*, ~~1874~~) ~~says~~ that, whatever be the remote cause of diarrhœa, the immediate cause lies in increased irritability of the intestine. We should, then, be careful not to increase this irritability. Instead of at once betaking ourselves to metallic preparations, such as zinc and bismuth, salts, and other astringents, we should exhaust all remedies first of all which work by soothing. Warm fomentations on the abdomen are hardly to be too warmly lauded. Among drugs, first of all opium must be named, and it is to be noted that it disturbs the digestion when given in large doses, and then increases the diarrhœa. If the diarrhœa be very excessive, so that the opium is carried off without being absorbed, morphine injections are indicated. Enemata have always this defect, that they irritate the large intestine, firstly by the instrument, and next by the volume of the fluid injected. They ought, therefore, only to be used in cases of necessity. Ipecacuanha is of service in cases where opium does not succeed. If both of these fail, bismuth may be tried, although it works as an irritant in the long run. Tonics and astringents are indicated only in atonic diarrhœa. Where even the slightest irritation exists, as in cancer, tuberculosis, &c., they are absolutely contra-indicated. The idea of making a crust form over ulcers in the bowels by means of astringents he holds to be a false hypothesis. If the astringents were able to form such crust the healthy part of the bowel would be made as useless as the diseased parts. Besides, such a crust would very soon be removed, as well by the contents of the bowel as by the greater suppuration from the ulcer. The astringents would only have the result of causing an injurious irritation of the ulcers.

DR. BOLLINGER ON INOCULATION OF TUBERCLES.

Dr. Bollinger (*Arch. fur exp. Path. und Phar.*, 1874) says that inoculation with tubercular (human) substances produces in the dog true miliary tuberculosis of the pleura, lungs, liver, and spleen ; on the other hand, in carnivora it produces none, or scarcely any reaction. Simultaneous inoculation and feeding with masses of tubercle of cattle produce in goats a double infection—namely, at once inoculative tubercles of the peritoneum, and tubercular ulcerations of the mucous membrane of the digestive canal, and well-marked tuberculous alteration of the chyliferous glands.

The bronchial contents in tuberculosis of cattle also causes tuberculosis when inoculated and also probably when mixed with the food of goats. Feeding with fresh tubercular masses of cattle when applied to carnivora is not hurtful, and no tuberculosis appears. On the other hand, feeding with cheesy and fresh tubercle masses on sheep and goats exhibits well-marked tuberculous infection, which is seen in ulcers of the intestine, hyperplasia of the follicles of the intestines, notable swelling and cheesy hardness of the lumbar glands, and sometimes in tubercular eruptions on the peritoneum and in the liver and lungs. The fatal effect of the tubercle poison is seen in this, that even small masses of tubercular lung substance have the power, when mixed with the food, to kill quite healthy goats in about two months. Feeding with simple cheesy pus excites in goats, kept in exactly similar circumstances as the others, no tuberculosis. Several forms of feeding with tubercle exhibited anatomo-pathologically a great unanimity with human scrofulosis, namely, in regard to the hyperplasia and cheesy hardening of the glands in the abdomen and in the neck.

MARCOLS WATER.

THIS chalybeate mineral water has been introduced to the English market. It is the product of a spring in the Department of the Ardeche, France, named Marcols.

Marcols water has the advantage that the iron is associated with bicarbonate of soda and some other alkaline and saline ingredients. The consequence is that it does not constipate, while the carbonic acid it contains makes it very palatable. There is no reason why Marcols water should not become popular among us. There is plenty of room for chalybeate mineral waters, and the free use of this is not likely to be attended with any inconvenience.

ON THE MISINTERPRETATION OF APPEARANCES UNDER THE MICROSCOPE.

MR. CHARLES STODDER has contributed to the Biological and Microscopical Section of the Academy of Natural Sciences a paper on this subject, which appears in the *Philadelphia Medical Times*.

All text-books caution novices against misinterpreting what they see, or think they see, in their microscopes. Experience teaches that the caution is needed even by many who have long used the instrument. Objects viewed by transmitted light are seen under such different conditions, and the light received by the eye has been subject to such entirely different influences, from those that affect ordinary vision, that these conditions and influences must be carefully considered in forming any conclusion of the structure of the object studied.

Mr. S. says: A thin, plain plate of any homogeneous substance, such as silica or glass, is as invisible as air. Let the plate be curved or corrugated, or vary in thickness, and it becomes visible. Why? Not from any change in its nature, but because of its action on light. It both reflects and refracts; consequently, different and varying intensities (and colours, unless homogeneous light is used) reach the eye, and thus render visible the corrugation or inequalities of the thing under investigation. Every particle of matter not absolutely opaque acts on transmitted light as a lens, or prism, or group of minute prisms, no matter what its size or shape. Every one of the most minute specks of matter acts as a lens, and presents to the eye, under a certain magnification and focal adjustment, the appearance of a dot, bead, or spherule. The combination of two curved surfaces will acts as a lens, and show beads where none exist in nature. He presented slides that seemed evidence that the so-called beadings seen in scales of insects, about which so much has been written, are also optical effects. So, too, of the "beading" of many of the diatoms, although he admitted that there are a vast number of species of diatoms with true "beads."

Too many histologists have a poor opinion of the study of diatoms; but errors in the interpretation of their appearances illustrate the errors that may, and do, occur in the study of other subjects, while, so far as is yet known to science, the Diatomaceæ afford, Mr. S. thinks, by far the best material known for the study of the instruments. The lenses that will best show the most minute structure of a diatom, he says, may, *à priori*, be taken to be the best to exhibit the most minute "lines and dots" that make up the aggregate of all structures; and the experience of histologists *who have used a large variety of instruments* will confirm this.

URÆMIC CONVULSIONS TREATED BY MORPHIA.

DR. FRED. E. POTTER, U.S.N., relates the following case in the *Boston Med. Journ.*:—

Mr. D., æt. 62, for the past year has been suffering from Bright's disease. On the 31st of January, 1874, he was seized with uræmic convulsions, each fit lasting from five to ten minutes, with from ten to twenty minutes of consciousness intervening; the consciousness during the intervals gradually decreased, until he lay between the attacks in a deeper stupor, breathing stertorously. As all means tried for relief proved unavailing, and as the patient was evidently failing rapidily, injected into the cellular tissue of the fore-arm, in the midst of a convulsion, twelve minims of Magendie's solution of morphia. For four hours following, the convulsions did not recur; he then had two light attacks, after which there was no return. In ten days he had so far recovered as to be dressed; he had partial paralysis of the right side and hemiopia, the left half of each retina being impaired.

During the past year the patient has had no return of convulsions; he complains of muscular weakness in the right upper extremity, with sensation of numbness of the right half of the body. The hemiopia has but slightly improved.

Dr. P. thinks "the result in this case goes far to show that the danger to be apprehended from the use of morphia in uræmic convulsions has been much exaggerated. The effects of opium upon the cerebral circulation whereby the comatose condition arising from a poisonous dose of that medicine is produced, in all probability differ widely from those which are caused by the non-elimination of the effete matter which in Bright's disease gives rise to uræmic convulsions; and though there is a strong analogy between the effects of the drug and of the poison, the above case tends to show the groundlessness of the fear that by administering opium we shall add fuel to the fire."

TOPICS OF THE TIME.

TYPHOID FEVER.

THE time seems far distant when typhoid fever will disappear, as Dr. Latham thinks it ought, from all returns of disease, and a number of questions that cluster around it will continue to be discussed. We propose to collate a few recent utterances on some of these points.

CONTAGION.

In the *Sanitary Journal* of Toronto we find a report of a debate that originated in the history of a case related at a Medical Society by Dr. Frothingham for the purpose of bringing the question of contagion before the Society.

Dr. Palmer believed that typhoid fever, whether communicated or not, was constantly originating *de novo*, especially from filth, and perhaps from other causes. That it was not particularly contagious seems to him proved from many facts. He believed the disease depended upon a peculiar poison, generated in filth, and was inclined to the opinion that the poison was multiplied in the bodies of the sick, and might be, especially by the intestinal discharges, conveyed to others. But he did not believe that all, or a majority of typhoid fevers were communicated from one person to another, by fæces or otherwise. There were differences of opinion in the profession on the subject, Dr. Budd leading the contagionists; but it was not an easy question to positively decide.

In reply to Dr. Palmer, Dr. Frothingham stated that he did not present his case as one unquestionably resulting from contagion, but he thought it to be so from several facts. Because every one does not take the disease in this way, is no argument against contagion; the same kind of reasoning would forbid us to regard small-pox or measles as contagious diseases.

Dr. Webb had no doubt of the contagion of typhoid fever, and referred to cases which he was confident were so contracted.

Dr. Nims thought there was reason to believe that there was a specific poison developed in some cases of typhoid fever, contagious, but to a less extent than in scarlatina or small-pox.

Dr. Breakey, without expressing an opinion on the question of contagion, mentioned the fact of some cases that came within his knowledge about twelve years ago, which at the time were thought to be the result of contagion.

Dr. Dunster referred to an outbreak of typhoid fever that had occurred regularly every year in a hospital under his charge in New York, the fever appearing each year in August, when the water supply was lowest, and owing to a defective arrangement in the pipe in the privy (used only at night) of one of the dormitories for boys; the water drawn during the night and early in the morning for drink for the inmates of this dormitory contained fæcal and urinal excretions in solution. The fever did not extend beyond this dormitory, and disappeared on the discovery and removal of its cause. As a rule, he thought the poison of typhoid fever was contracted only by contact with the excretions of patients, and was not properly an atmospheric poison, though under some conditions he had no doubt it was contagious, but in a much less marked degree than the contagious exanthemata.

MINUTE PATHOLOGY.

Dr. E. Klein's researches have lately been so freely discussed that an abstract will prove interesting.

(1) Sections through the hardened ilium of persons who have died in consequence of enteric fever show that there is an abundant absorption of peculiar organism by the lymphatics and venous vessels of the mucous membranes over and around the Peyer's glands.

(2) In the earliest case examined (seventh day after the headache) Lieberkühn's crypts contained in their lumen peculiar greenish-brown, generally spherical bodies of various sizes—from three times as large as red blood corpuscles to one-fourth the size. At the margin of the dark olive-green clusters of these bodies numerous hour-glass shaped forms are to be met with, indicating rapid division. Similar bodies are to be found in the tissue of the mucous membrane, enclosed in the lymphoid cells of the adenoid tissue. They are also contained in the venous vessels, where they divide and subdivide into small granules—micrococci. These micrococci stand in genetic relation to a mycelium, the filaments of which are branched and apparently smooth.

These organisms are found not only in the neighbourhood of Peyer's glands, when moderately swollen, but also in portions of the intestinal mucous membrane, slightly swollen.

Lumps of micrococci are found penetrating the free surface through the epithelium into the substance of the mucous membrane.

(3) In a case advanced to the twelfth day, I found large quantities of micrococci penetrating from the free surface of the mucous membrane into its tissues, and into Lieberkühnian crypts, and hence into the lymph spaces and venous vessels.

(4) In another case, still more advanced (sixteenth day), the same relations were met, the number of micrococci being smaller.

TREATMENT.

In the DOCTOR for last March we reported that Dr. Johnson, of King's College, with special reference to the diarrhœa, had drawn attention in the *Practitioner* to the value of dieting the patient and withholding medicines. In the June number of our contemporary Dr. Henry Kennedy, of Dublin, combats Dr. Johnson's views with considerable force. Dr. Kennedy first speaks of the extent to which the ilium is involved as being of the utmost consequence, for it varies much, and then adds that it is too much forgotten that in a number of instances both the ascending and transverse colon are also engaged, and for such we should ever search. Obviously much depends on the presence or absence of this state, which can be made out if we only look for it.

Next, he thinks we should ascertain to what extent we have the diarrhœa in check, and this is to be done by the use of astringents. Not that for a moment he would entirely stop the diarrhœa, but he would keep it moderate. Under these circumstances, opium, in small doses, he believes to be of great service, as it not only soothes, but acts as a stimulant, and "mischievous" is the very opposite of what its effects seem to him to be. Moreover, he says, cases occur—exceptional, it may be—where a mild aperient proves of great use. "I am not speaking of cases where constipation has existed all through, but where there has been diarrhœa. I need scarcely speak of cases where, with the diarrhœa, there is also hæmorrhage. It would be a bold step, I take it, for anyone here to trust to diet alone; in fact, in any aspect in which we can view the diarrhœa of typhoid fever, I consider it calls for medical interference, more than any modification of the diet can effect; and this leads me, in the last place, to say a word or two about the diet in typhoid fever. I have not found it the simple matter books would lead one to expect; this is specially to be observed when the stomach is irritable, and still more if everything taken be thrown off. Here the matter becomes one of grave moment, and the case calls for the most delicate handling. I have found wine or brandy in most of these act well, and the amount which may then be given is something extraordinary. Last autumn I saw, with Drs. Hayden and Wyse, a case in which thirty ounces of brandy were taken each twenty-four hours; this went on many days, and without producing the slightest head symptoms, and the patient made a good recovery. It has often appeared to me that in stimulants, and more particularly in wine, we have a fluid food well suited to fever and its many types. I call it food, for though its component parts exist in very minute proportions, still they do exist, and we know they are all what may be called conservative; and whatever explanation be given of the effects, whether as a stimulant or as supplying certain ingredients to the frame, or both, certain it is that in many cases the results are most satisfactory, and what is of great consequence, these stimulants are borne well when other fluid food is not; and this leads me, in the last place, to notice that even where the stomach is not irritable, there may be difficulty in the administration of even such a simple fluid as milk. This is not so likely to occur with children; but in adults, no matter how we may change the milk, by giving it with soda or lime water, &c., it often disagrees; and I believe it is always of consequence to ascertain beforehand whether the patient can use it while in health. Similar remarks might be made about beef-tea, chicken-broth, and still more about eggs, which latter the author speaks of using as a matter of course."

Dr. K.'s object in thus writing is, first, to question the prudence of treating the diarrhœa of typhoid fever by diet alone; and, secondly, to show that the varied types of the disease require a corresponding modification in the treatment—in other words, a routine treatment is to be avoided.

The effects of quinine on typhoid have been variously estimated, and its action in this disease as well as in septicæmia has again been investigated by Professor Binz, of Bonn, who, in the *Berliner Klin. Wochenschrift*, No. 8, 1875, alludes to experiments made by himself and others as to the effect of quinine in preventing a fatal result after injections of putrid material. He has found that in many cases (of dogs) experimented upon a fatal result may be prevented by the administration of quinine, and even in those cases where death ensues its advent is much delayed. The temperature is lowered in all cases. As to men, Binz quotes Socin, who, at his suggestion, treated great numbers of patients during the Franco-Prussian war by quinine, in doses of from ninety to one hundred grains daily, with great success. Socin likewise suggests the simultaneous administration of alcohol, and says that he has obtained surprising results. Binz also alludes to the use of quinine in typhoid fever, and quotes Liebermeister as saying that if he had to choose between the use of cold applications and quinine in a given case, he would choose the latter. As to the objection that quinine affects the intestines and causes bloody stools, Binz says that this result is due to the use of the sulphate, and recommends using the muriate instead.

BACTERIA IN TYPHOID FEVER.

In blood taken from the finger of a typhoid patient in the second week of the disease, Eichhorst (*Deutsches Archiv. für klinische Medicin*, 1874, xiv., 223) found fine granular, colourless cells, which were observed for five days. These were from four to six times larger in diameter than the white blood corpuscles, and contained from two to seven yellow disks entirely resembling red blood corpuscles, though somewhat paler.

They could be freed from the larger cells by pressure and the addition of water. Some of the cells presented projections like those of contractile cells. Otherwise the blood was not abnormal; even the small glistening granules, generally so abundant in febrile blood, were but scanty.

ABOUT BACTERIA.

Recent discussions give so much interest to everything relating to bacteria, that a report on "Recent Progress in Pathology and Pathological Anatomy," contributed to our able contemporary, the *Boston Medical and Surgical Journal*, by Dr. R. H. Fitz, is mainly occupied with an abstract of some foreign papers on the subject. We avail ourselves of Dr. Fitz as a safe guide. First, he very properly refers to the recognition of bacteria. On this point he quotes Hiller, who, in *Virchow's Archiv.*, vol. lxii., 1875, after referring to the difficulties in the way of determining by optical and chemical means the nature of the globular forms of bacteria, refers to his own experiments, and concludes that his methods are such as may permit bacteria to be recognised and to be distinguished from bodies of a similar appearance. To make these methods available they must be properly employed, and with a sufficient botanical knowledge of the life and growth of the vegetation. These means are optical and chemical, supplemented by culture.

By optical means are determined the characteristic forms of growths—as rods and threads—and the characteristic movements of monads and rods in very fluid media. The manner of their growth and multiplication is also thus ascertained, the rule being that free monads and rods can only develope into free individuals of the same sort under appearances of motion, and that a growth of motionless bacteria is always a continuous one, necessarily leading to the formation of threads or masses. The granular masses may be seen to be firm, continuous, membraniform, or loose, movable, forming an emulsion.

The chemical means serve to distinguish granular detritus embedded in albuminous material, such as results from the death of cells, from membraniform masses of vegetation, since the former is dissolved, liquefied by caustic potash, and is coagulated by alcohol, whereas the latter are unaffected by these reagents. Further, if tissues are macerated for an hour in a 10 per cent. solution of caustic potash, monads contained in them will be stained yellow by iodine; fat granules are not coloured.

Finally, by culture the vitality of the organisms may be determined. The usual precautions are insisted upon, and bent capillary tubes are recommended for the examination of the blood, the upper end being closed with cotton, the lower end sealed.

Passing now to the subject of bacteria in disease, still following Dr. Fitz, we have to consider

BACTERIA IN ENDOCARDITIS AND ACUTE RHEUMATISM.

Previous to 1870 but little general interest was manifested in certain forms of endocarditis, which had been more frequently observed in puerperal conditions, though Virchow had repeatedly called attention to the matter, had published several cases, and had spoken of the form as an acute, ulcerating (diphtheritic) endocarditis ("Gesammelte Abhandlungen," 1856, page 721).

Meyer ("Ueber die Endocarditis ulcerosa," 1870. "Jahresbericht von Virchow und Hirsch für 1871," ii., 92) published a brochure in 1870 on ulcerated endocarditis, wherein he spoke of its great clinical importance, and of the various conditions with which it was associated, as emboli, metastatic abscesses, hæmorrhages, parenchymatous alterations, &c. The disease was spoken of as a grave one, and was regarded in the same light as pyæmia. The ulceration of the valves of the heart was considered to be due to an exciting cause, as articular rheumatism, febrile processes of a general character, puerperal diseases, typhus, exanthemata, &c., which acted upon an already diseased endocardium, as the remains of an antecedent valvular endocarditis were usually present.

The emboli producing the secondary changes were regarded as elements floated away from the endocardium, which were chemically injurious, and similar to pus, or of a purulent character.

Virchow ("Ueber die Chlorose und Endocarditis puerperalis," 1872) referred to this subject at considerable length in a communication to the Berlin Obstetrical Society, stating that usually such decided alterations of the uterus and its appendages were present that the endocarditis might be regarded rather as a complication. There were also cases where the endocarditis was the main disturbance, the uterus being relatively unaltered. It was peculiar to the process that the changes in the valves, which at the outset resembled those of simple endocarditis, terminated in softening and rupture. Multiple embolism was thus likely to occur, the results of which were minute nodules resembling abscesses. Such forms may be exceedingly malignant in character, therein seeming to be influenced by the accompanying puerperal affection, as diphtheritis, phlegmonous inflammation of the broad ligament, &c. The condition of the valves resembled a diphtheritic mass, composed of granular particles, and it was considered probable that the changes occurring in the diseased valve were allied to the diphtheritic process. It was also admitted that minute organisms of the same apparent character were present in the circulating blood during life, which might "take root" in the endocardial surface, and multiply. In some instances Virchow found similar granular masses in the metastatic nodules; he had seen them also in the vessels of the choroid, in the spleen and kidneys, not only in but also outside the vessels. He had also found them in the kidneys from cases of putrid cystitis, and his view of their parasitic nature was corroborated by the observations of Von Recklinghausen (*Centralblatt für die Medicinischen Wissenschaften*, 1871, page 713). This pathologist ascertained that miliary accumulations of micrococci were the cause of the small abscesses found in a large number of infectious diseases, particularly in pyæmia and puerperal fever; also in typhus, acute articular rheumatism, urinary infiltration, and pulmonary gangrene. They were found most frequently in the kidneys, usually surrounded by a zone of tissue, hæmorrhagic or infiltrated with pus, though there might be no surrounding reactive appearances where the condition was a recent one In many instances there was no endocarditis. On one occasion where slight depositions were found upon the mitral valve, he considered it more probable that such were metastatic in the same sense as their presence in other organs.

Long before this, Beckmann (*Virchow's Archiv.*, 1856, ix,. 221) spoke of the occurrence of a finely granular mass in the renal tubules, Malpighian bodies and capsules of those persons who had died of pyæmia. He stated further that the individual granules bore a close resemblance to vibrios, and at times were found to present vibratory movements.

Heiberg (*Virchow's Archiv.*, 1872, lvi., 407) reported a case of puerperal ulcerative endocarditis, where granular masses were present in the heart, and which he considered of a parasitic nature. He gave also a *résumé* of a case of Winge's, communicated to the Swedish Medical Society in 1869, in which not only were the masses present in the heart, but they were also found in the embolic nodules. In both these cases the granules were regarded as fungous growths, and it was supposed that their germs had entered from without.

It was further suggested that every ulcerative endocarditis might be "pyæmic (or puerperal), an infectious disease due to the entrance of noxious substances (fungi ?) from without, a view corresponding tolerably with Virchow's opinion that the ulceration was of a diphtheritic character."

Under the title "A Case of Capillary Embolism," Beckmann (*Virchow's Archiv.*, 1857, xii., 59) reported one whose clinical course suggested that of typhus with petechiæ, but the anatomical appearances were those of ulcerative endocarditis and multiple embolism. The diseased valve bore finely granular masses not readily acted upon by reagents. Minute spots in the substance of the heart contained capillaries in which was a similar granular mass. Like conditions were found in the kidneys and in the vessels of the pia mater.

An article on diphtheritic endocarditis, by Eberth (*Virchow's Archiv.*, 1873. lvii. 228), now appeared. A special form of disease of the valves of the heart in pyæmia had suggested itself to him as due to minute organisms. It appeared like the acute rheumatic forms, but masses of spherical bacteria were found upon the surfaces of the valves. He attributed to these the property of producing secondary suppuration independently of the transfer of coarser particles.

His case is recorded as one of malignant ulcerative endocarditis, pursuing an independent course, with the symptoms and characteristic alterations of pyæmia, but quite free from the presence of a diphtheritic wound. Granules regarded as globular bacteria were found in the heart in punctate hæmorrhages and abscesses, and as emboli in the Malpighian corpuscles. A local source for their admission into the blood could not be ascertained.

In the same year Lanceraux (*Boston Medical and Surgical Journal*, October, 16, 1873. Second Report on Pathology) suggested the view that a paludal poison gave rise to the ulcerative, vegetative form of endocarditis, the clinical features of which resembled those of septicæmia.

Eberth ("Untersuchungen aus dem pathologischen Institut zu Zurich, 1873. "Jahresbericht von Virchow und Hirsch," 1873, i., 213) then reported a second case which proved rapidly fatal, with ulceration and diphtheritic patches upon the mitral valve, and miliary abscesses in the heart and kidneys, the vessels in which contained punctate bacteria. Colonies of bacteria were found also in the swollen mesenteric glands. There was no wound through which the spores could have entered from without.

The corneæ of rabits were inoculated with the contents of the cardiac and renal abscesses; profuse suppuration and perforation followed, and a decided growth of bacteria was found here.

A case of primary diphtheritic endocarditis was next published by Maier (*Virchow's Archiv.*, 1874, lxii., 145). The aortic and pulmonary valves were thickened, the former ulcerated and perforated. From the perforated spot a canal extended through the base of the auricular septum into the left auricle, where was a ragged opening. A large abscess was found beneath the capsule of the right kidney, communicating with the renal pelvis; elsewhere in this organ were small red and yellow spots. A finely granular mass like that found in diphtheritic mucous membranes was observed on the edges of the perforation of the aorta, and was considered to be composed of globular forms of bacteria. Similar granules were scraped from the wall of the abscess in the kidney, and others were found between the tubes, in the Malpighian capsules; also in the minute yellow spots. The case was regarded as identical with Eberth's, though its course was less rapid. The onset of the disease, with chills, high temperature, headache, diarrhœa, stitch in the side (splenic enlargement), was very characteristic. It progressed with high temperature, congestion of various organs, and a tendency to hæmorrhages in them, diarrhœa, and marked nervous symptoms indicative of a septicæmia. The nervous symptoms were twitchings of the face, tetanus of the cervical muscles, violent headaches; and later, babbling, tremors. involuntary evacuations, and sopor.

The symptoms and post-mortem appearances indicated a complication of septicæmia and embolism, the main affection being an endocarditis (probably primary) and a nephritis. Here, too, there was no sufficient evidence of the manner by which the spores entered the system.

The septic nature of some forms of acute articular rheumatism is very strongly suggested by the case reported by Fleischhauer. (*Virchow's Archiv.*, 1875, lxii., 386.) He alludes to the occurrence of acute inflammation of the joints in puerperal fever, scarlatina, diphtheritis, typhus, dysentery, erysipelas, ulcerative endocarditis, and pyæmia. It is then suggested that a like or similar cause may be active in all, a view favoured by the discovery of spores in almost all the above-mentioned diseases.

The clinical course was that of rheumatism, lasting four weeks, during the last two of which the symptoms were of so acute a character as to compel the patient to take to her bed. Miliary abscesses were found in both lungs, kidneys, heart, and in various muscles; there was also a suppurative parotitis and synovitis of various joints.

The renal abscesses contained granules whose optical and chemical relations were those of micrococci. These were present in the tubules mainly; between them and the more normal parts of the kidney was a zone of pus corpuscles. The organisms, at times, extended into the surrounding tissue, apparently having escaped from the tubes. The muscular abscesses, the largest of which were in close relation to the inflamed joints, consisted of agglomerations of globular bacteria surrounded by a layer of pus corpuscles. The same was true of the abscesses in the heart. Those in the lungs often presented as centres two or more alveoli filled with micrococci, surrounding which was pus, and still farther out the alveoli were filled with blood. In larger abscesses the bacteria were present in capillaries and veins. In the vessels and ducts of the inflamed parotid gland, colonies of micrococci were found. The examination of the joints gave negative results so far as these bodies were concerned. The manner of their invasion was obscure. It was considered that this case might be placed in the category of those of diphtheritic endocarditis previously referred to, notwithstanding the absence of that affection here.

SPINAL ARTHROPATHIES.

Dr. Weir Mitchell has within the last two years met with a number of cases of disease of the joints of the legs, associated in each instance with atrophic states of limited groups of muscles, and offering more or less distinct clinical evidence of being due to spinal disease. The history of spinal and neural arthropathies owes its best study to Americans and French, and among the former Dr. Weir Mitchell and his father, Dr. John K. Mitchell, deserve honourable mention. Charcot, in his "Leçons sur les Maladies du Système Nerveux," Paris, 1872-73, p. 100 *et seq.*, distinguishes joint lesions of spinal origin as of two varieties—1. Those which are acute or subacute and are accompanied with redness, swelling, and sometimes with more or less violent pain; 2. The chronic, that of slow growth, remarkably different from the first-named disorders.

Dr. Mitchell points out that to his late father belongs the credit of the first discovery that "an obvious spinal cause may produce a rheumatism characterised by heat, pain, redness, and tumefaction," as stated in the second paper on rheumatism by the late Dr. John K. Mitchell. In his first essay he described cases of Pott's disease, in which, below the diseased region, there were acute inflammations of the joints, which proved amenable to treatment directed to the point of spinal lesion (*American Journal of Medical Science*, 1831, p. 55). M. Charcot, *op. cit.*, pp. 100, 101, in acknowledging the first mention of these facts, adds, correctly, that this cause of arthropathies is rare, and, apparently ignorant of Dr. Mitchell's second paper (*American Journal of Medical Science*, 1833, p. 360), says that traumatic lesions of the cord are more often the parent of joint disorders, and refers to Gull ("Guy's Hospital Reports, 3rd series, t. iv.) for instances of spinal commotion as competent to occasion a like result. In his second paper Dr. Mitchell describes the very curious case of Dr. Parker, of Elkton, Maryland, in October, 1831. This gentleman, who had previously had rheumatism, was thrown from his carriage, and, falling on his back, was instantly paralysed slightly in his arms, but totally in his lower limbs. The next day he had swelling, pain, redness, and heat in the joints of the hands and wrists. These symptoms were thereafter aggravated by pressure upon the seat of injury in the spine, but relieved by the application of certain remedies to the spine. They shifted their place from joint to joint in the upper limbs, but did not affect the legs.

In 1846 Dr. Scott Alison (*Lancet*, 1846, vol. i., p. 227) described very clearly the arthropathies which occur in hemiplegia, but incorrectly ascribed them to the lithic diathesis under which he presumed his patients to be suffering, and to which he conceived all such cases must be due.

According to Charcot, similar lesions have been seen in progressive muscular atrophy by Patruban, Remak, and Rosenthal. Finally, in 1864, Drs. Weir Mitchell, Morehouse, and Keen described the joint diseases caused by injuries to nerve trunks.

The pathological mechanism of the various neural arthropathies is clear only up to a certain point, beyond which all is as yet obscure. It has been made most probable, that all the spinal arthropathies are due to disease of the grey matter of the anterior cornua of the cord. It has been shown that this disease of the grey matter is not caused by the inertia to which some forms of spinal disease condemn the patient, and that neither in these cases are the peripheral nerves at fault. It has also been suspected that the cerebral arthropathies are caused by a descending sclerosis finally involving the anterior tracts of grey matter in the cord, but as to this Dr. Mitchell has a reasonable doubt, owing to the very early date at which he has sometimes seen joint lesions follow a cerebral hæmorrhage, and to the suddenness of production, and the great generalisation of the joint lesion in some of the same class of cases. It has been remarked that the joints swell from fifteen days to three months after an apoplectic attack, coincidently with the coming on of the "late rigidity," which we now commonly ascribe to descending sclerosis. Dr. Mitchell has, however, again and again seen the joint lesions come on earlier, and without any muscular rigidity, and also get entirely and rapidly well, which does not look as if they could in these cases have been due to sclerosis. Thus, in one case, they came on the day after an attack of left hemiplegia, in another on the third day.

The local peculiarities of most of the spinal and cerebral arthropathies are not such as enable the most acute clinical observer to distinguish them from some of the ordinary tpes of rheumatism, a fact which certain authors have frankly admitted. The general clinical characters, says Charcot, which differentiate them from common rheumatism of joints, are their limitation to the joints of the members afflicted with palsy, their relation in time to hemiplegia, the coexistence of other trophic troubles; but, if we begin by suspecting that some at least of our general rheumatisms may be of spinal birth, these would be only points in our favour, and the cases of Pott's disease in which remote joint lesions follow it, without palsies, would enable us to believe that such a spinal condition from disease might sometimes exist as would give rise to rheumatic joints without the concurrent existence of other troubles more palpably of neural origin. Moreover, Dr. Mitchell has twice seen cases of chronic rheumatism following acute rheumatism where an apoplectic attack produced a few days later an enormous exaggeration of the joint disease on the palsied side, so that there is something in the status of a palsied limb which favours the increase of an already present rheumatism.

However we may differ as to whether rheumatic fever be ever a spinal disease, all pathologists now admit the existence of joint disease distinctly due to neural lesions, but as to the mechanism of the production of these arthropathies, we are still at fault. The discovery of arthropathies caused by injury of nerve trunks, seemed to promise to make the research more simple, but as yet it has done little to aid us. It has been made clear, however, that in these, as probably in central lesions, they are due rather to irritative states than to absolute defects of power. It has been shown that they are caused neither by vascular palsies nor by vasal spasm, nor yet by inertia, which is, as we know, competent to cause, in limbs long at rest on splints, certain chronic forms of joint disease. Dr. Mitchell has seen neuro-traumatic joint disease break out suddenly and with terrible severity within three days of a nerve lesion, which but slightly affected either motion or feeling, and which certainly gave rise to no atrophies, so that it also seems unfair to attribute them to defects of nutrition in this sense or in this direction.

Formerly Dr. Mitchell showed us how curiously even very slight lesions of nerves affect the cutaneous secretions, and it seems fair to infer that disturbances in the chemical balances of the deeper tissues may likewise arise from as slight neural causes. How far these may also come from central disease, and how competent in either case they may be to trouble the life of the tissues and occasion local inflammations, we can hardly yet determine.

Dr. M. has seen but one case of entire annihilation of nerve influence in a limb, and in this all the nerves were cut save the fibres which pass with the vessels. No notable joint lesions followed the section. The sections of single nerves never altogether insulate neurally a part even of a limb or lesser member, but it is commonly the partial sections of one nerve which cause joint disease, and then arises this curious question: Do they act directly along the injured peripherally distributed fibres and thus affect the joint, or does the local irritation influence the centre, and through it and the still entire nerve threads act upon the joint to disorder its nutritive life? He inclines to this latter opinion, which is favoured by various reasons, and especially by some recorded cases. But if this view be taken and we come to conceive of a state of the centres in which there were disturbance from without competent to put them in a state to cause joint lesions, we are readily made able to add another step in belief, and conceive that sometimes these centres may without peripheral irritations be thrown into such a state as to occasion these lesions.

Hitherto, in all of the reported cases of neural arthropathy, there has been a passive central or peripheral nerve lesion, and usually there have been also precedent symptoms not related to the joints, such as atrophy, paralysis, anæsthesia, or hyperæsthesia. Dr. M. now submits four histories, in three of which the joint lesion came first, existed alone for a time, and was followed by other nutritive, sensory and motor conditions of the limbs, which revealed the spinal column as the organ upon which the whole chain of phenomena depended.

It is natural to ask here whether treatment of the spinal lesion at an early period would have prevented the joint disease, for in all four cases cure of the wasting and palsy is reported.

BLOOD-LETTING—A LOST ART.

At the annual meeting of the American Medical Association Prof. S. D. Gross, of Philadelphia, read a paper entitled "One of the Lost Arts," the so-called lost art being blood-letting considered as a therapeutic agent. As our readers are aware, some efforts have been made in this country to revive the practice of blood-letting. A brief abstract of the great American surgeon's paper will, therefore, be of unusual interest.

The learned professor argued that while the physicians of a few generations back resorted to the lancet as a specific remedy in the management of promiscuous diseases, both acute and chronic, the system of blood-letting, after having reached this extreme, had fallen gradually into disuse, until, at the present day, it was as much as a physician's reputation was worth to hazard the suggestion of blood-letting, save in its slight topical form, as in the use of the scarificator, cupping glasses, and the occasional application of leeches. He thought it was really saying too much, with our present extreme prejudices against venesection, that we should assume to be so much wiser than our fathers, who had lent their approval to a custom that had been sanctioned by ages of experience. Might we not, in going to the opposite extreme, do violence to a principle that was really conservative in its nature? It was the extreme view taken either way that was likely to occasion untoward results. It was the fashion of the present day to decry this kind of practice, and, like many other fashions, it was founded upon ideas that would not stand the test of reasoning investigation. Even disease itself, in some form or other, had often become fashionable.

An instance in point was cited, in reference to Louis XIV., of France, who was afflicted with a loathsome disease, with which the people of his court soon became fashionably inflicted, and which many of the higher classes affected. There was as much tyranny exercised by the opinion of an eminent authority (eminent because it was *foreign*) in support of improbable or questionable medical views as there was in the mandates of the queen of fashion, foremost among whom, in her time, was the Empress Eugenie, and to which every woman felt herself compelled to yield, or else forego her influence and standing in the fashionable world. So with a majority of the medical profession, who abandoned voluntarily, or felt compelled so to do, old and once cherished opinions, in order that, by following new theories, they might not render themselves conspicuous by an adherence to the ancient *régime*. It was simply the fashion of the day. The speaker said that, though he was no prophet, nor the son of a prophet, the time was fast coming, if it were not already at hand, when a reaction would ensue in favour of the therapeutical effect of blood-letting, and the idle lancet be again resorted to as one of the main reliances in the treatment of many forms of disease, particularly in the acute stages; for, continued he, history is constantly repeating itself, and knowledge runs in a circle. There were times to bleed and times not to bleed, and these distinctions, wherein our fathers erred, we of this day and time are enabled to recognise readily and turn to valuable account. When we had acquired a more accurate knowledge of diseases, the tendency to run into extremes would be less characteristic of the profession, if not avoided altogether.

The substitute for the lancet, now-a-days, consisted in the administration of medicines that had a tendency to reduce the fulness, frequency, and power of the heart's action, and the extreme use of these was more dangerous than the one decried. Women in childbed had often lost immense quantities of blood, more than an old-time physician could ever think he had occasion to draw; hæmorrhages from various causes, and the continued and immoderate use of the lancet, in many recorded cases, in which no more blood came away because there was too little left to run, could be cited, and yet recovery followed, and the life-current was speedily reproduced, under a nourishing and sustaining after-treatment.

Cases of acute diseases, and those in other stages of development were cited to prove the efficacy of a timely abstraction of blood from a vein, while individual cases were cited to show that this practice was the only one which insured a further lease of life or ultimate recovery.

TRANSFUSION WITH BLOOD OF THE LOWER ANIMALS.

For several cases of transfusion of blood lately carried out in Berlin and elsewhere the blood of lambs has been used with perfect success. It has to be remarked, however, that when transfusion is performed of the blood of animals of different species there is set up in the animal which has the blood injected into it some febrile symptoms, which may disappear without leaving any trace, if the quantity of blood injected be but very small.

When this fever has passed away different symptoms may persist, and as it has been noted that the blood globules of one species become disintegrated in the blood of another animal, it results that the masses of stroma of the

latter, carried along in the circulation, may produce more or less extensive obstructions of the capillaries and small vessels. This in all probability is the cause of the disturbances which are observed to exist. After the paroxysm of fever the vessels may get clear, or the thrombosis persists, and there is inflammation and formation of new capillaries, according to Dr. Laudois, of Greifswold. Severe disturbances in the nutrition of the organs thus altered, and even death from marasmus, may ensue.

These phenomena may be remarked if we inject the blood of a mammalian animal into the veins of a frog, and examine the circulation in the mesentery or any other transparent part of the animal. The foreign blood globules are seen to coalesce, and their agglutinated *débris* obstructs more or less extended vascular districts. These spots may consecutively become the seat of inflammation. This fact may also be observed among mammalia where these different organs are examined after transfusion. Everywhere there is noticed obliteration of the capillaries, and even extravasation, and all those lesions which indicate congestion of blood and more or less complete obstruction. Of course, blood-globules of the same species of animal itself, if they become disintegrated in the blood injected, have exactly the same effect.

Dr. Laudois (*Centralbl. f. M. Wiss.*) shows that in the lungs the obliteration of the capillaries produces dyspnœa, and ecchymoses are frequently noticed at the autopsy. In the intestines there is noticed after the injection of the blood of a different species of animal impetuous peristaltic movements, with vomiting and frequent stools. These phenomena are often accompanied by violent pains and eructations. The obstruction in the capillaries produces in several points anæmia of the intestinal canal, whence arises exaggeration of its movements. When the disturbances of the circulation are excessive, paralysis of the intestines may ensue, and the abdomen becomes tympanitic. Tearing of the vessels and ecchymosis of the intestine and of the mesentery are frequent cadaveric phenomena.

The urine becomes characterised by the presence of hemato-globuline and albumen, and by the diminution of the urea. It may become diminished in quantity also, by obstruction taking place in the vessels of the kidney. The diminution, and even absence of urea, is explained by the disturbances in the nutrition in the liver and lymphatic glands, organs in which urea is in great part elaborated. Abortion may ensue from the disturbance of the uterine circulation, and also from the perturbation which ensue in the general condition. Extensive stagnation in the vessels produces the cooling of the skin, and consequently an augmented internal temperature. The inflammatory reaction which follows the obliteration may cause an exanthem resembling urticaria.

The interruption of the circulation produces stiffness and contraction of the muscles; sometimes the whole extremity of an animal is extended and stiffened. This condition is accompanied by augmented heat, and as the loss of heat by the skin is diminished the temperature of the body may rise considerably. It rose in one instance to 43·4° c. in a day after the abundant injection of the blood of a calf. In the nervous system the first symptoms noticed are excitement, then depression, paralysis, and coma. The excitation of the vaso-motor centre is important with regard to the obliterated vessels; the pressure exercised against the obstacle and consecutive relaxation of the walls may re-establish the circulation. The febrile movement also depends on the nervous system.

Constant capillary hæmorrhages are noticed from the excess of pressure in those vessels which still remain permeable. In all such cases the quantity of blood transfused is supposed to be sufficient to render the phenomena of reaction visible. If we wish to derive from these experiments conclusions relative to the value of the transfusion of blood from animals to man we ought first of all to be penetrated with this truth, that as the globules become destroyed in case of the blood, it would be illusory to admit their ultimate functional utility. The quantity of the materials furnished by the disintegrated globules and the oxygen given out is too insignificant to have any action on the general nutrition, and this is true for the nutritive changes denoted by the diminution of the urea. If experience proved that the transfusion of blood of animals was followed with good results, and even cure in certain patients, and especially in consumptive patients, then Dr. Laudois thinks that the cause must be looked for in the violent perturbation produced by the operation in the circulation. The obliteration of vessels in the diseased part might also, by formation of new capillaries, make the disease take on a new and favourable progress. But if there were tendency to hæmorrhage these might be rendered more intense and graver.

We imagine that the treatment of pulmonary consumption by the transfusion of blood from other mammalia is not likely to come into favour soon in this country. Notwithstanding a recent extravagant leading article in the *Times*, to the effect that phthisis is distinctly a most contagious disease, it must be said, we think, that all clinical experience points to pulmonary consumption being caused in the overwhelming majority of instances by the breaking down of the powers of nutrition. Those fortunate persons who escape being cut off in the early age of that terrible malady, and may entirely lose all symptoms of the disease, owe their restoration, we opine, to the agents of good hygiene, aided by those medicines which restore the powers of the stomach and intestines in nourishing the system.

Transfusion of blood should be limited strictly to such cases of anæmia as arise from sudden loss of blood, such as occur in post-partum hæmorrhage, or in loss of blood aft When confined to such cases this modernwounds revival of transfusion has undoubtedly rendered many and great services to humanity; but we sincerely trust that there may be no extensive experiments made on unfortunate phthisical patients with lamb's blood, or we shall certainly ere long witness several severe and fatal results from such a practice.

SPECIAL DEPARTMENT.

RECENT PROGRESS IN OTOLOGY.

To our recent report on this subject may be advantageously appended a portion of another report issued in the "Transactions of the American Otological Society," where Dr. Buck describes the ultimate forms of granulation tissue in the middle ear, when left to itself, as follows:—

"First, it may continue to develope until finally, by its size alone, it creates such alarming symptoms that the destruction of the mass becomes necessary. During the progress of its growth only a portion of the cells—whatever their origin may be—go to build up tissue; the majority are cast off from the surface of the mass in the form of pus. A certain proportion of these masses will be found to possess, at a certain stage of their growth, a covering of skin or of mucous membrane, according to the locality in which they originate. Probably a large proportion of them, however, consist of simple granulation tissue without any covering of skin or mucous membrane.

"Second, it may remain for an indefinite period of time in a condition of nearly absolute inactivity, so far as increase in size or apparent change in texture is concerned.

"Third, it may be cast off from its nutrient base by the wasting away of its pedicle.

"Fourth, it may assume one of the following ultimate forms or conditions: (1) It may become covered with skin or mucous membrane, and remain in a quiet condition, like the adjacent normal tissues. The mass then simply represents a localised hypertrophy of the subcutaneous or submucous connective tissue, and in consistence is the same as or a little harder than the normal tissue. (2) It may become covered with skin and then undergo what I might call horny degeneration. (3) The mass may become covered with skin or mucous membrane, and its central portions undergo a change into true osseous tissue."

Buck then gives the histories of several cases in which he was able to watch the changes of granulation tissue into some of these forms, and the fourth case is of special interest, as it serves to explain at least one mode of the development of the cutaneous membranes which are sometimes found closing the external meatus. In this case a ring of granulations was formed around the meatus, the result, probably, of the irritation caused by a prune pit in the passage; and in the course of a month these granulations united into a membrane, which became covered with epidermis and nearly closed the meatus. Fuming nitric acid caused a shriveling of the whole mass, and the meatus was restored to its normal size and condition.

One mode in which the granulations sometimes disappear seems to have been overlooked by Buck, probably accidentally, as it must have been observed, and that is a gradual shriveling of the mass from the subsidence of inflammation around it.

THE ACCOMMODATIVE POWER OF THE EAR, AND ITS DISTURBANCES.

Dr. Orne Green's report for the *Boston Medical Journal* contains a good abstract of Lucæ's researches on this subject. He says that Lucæ (*Berliner klinische Wochenschrift*) gives a synopsis of his investigations on the muscles of accommodation in the ear. He claims that the two tympanic muscles, the tensor tympani and the stapedius, form a mechanism by which the ear can accommodate itself, on the one hand, to the deeper or musical notes, and, on the other hand, to the higher notes beyond the musical scale; the accommodation for the musical notes is provided in the tensor tympani muscle; that for the higher or non-musical notes is provided in the stapedius muscle. Lucæ has convinced himself, both by a repetition of Fick's experiments with the manometer, and also by inspection of the membrane in persons who had the power of voluntary contraction of the muscle, that a contraction of the tensor tympani muscle increases the tension of the membrana tympani. Both of those methods show, during contraction of the muscle, a drawing inwards and a consequent increased tension of the membrane; and tests with the lowest notes of the tuning-fork demonstrate that this increased tension produces an improvement in the power of hearing these notes, while a relaxation of the muscle again diminishes this power.

Contraction of the stapedius muscle can be caused, at least in some persons, by contraction of the muscles of the face, owing to the fact that the stapedius receives its nerves from the facial; and Lucæ by careful inspection of the membrana tympani has been able to see a decided outward movement and consequent relaxation of the membrane, as the result of contraction of the stapedius. This relaxation of the membrane is proved by experiment to produce a decided diminution in the power of hearing the notes of a tuning-fork.

For testing more accurately the accommodative power of these two muscles, Lucæ has used a series of König's steel rods, and finds that, although somewhat variable in different persons, the tensor tympani increases the power of the notes up to $C^6 = 8192$ vibrations in the second (German scale); $E^6 = 10{,}240$ vibrations is uninfluenced by either the tensor tympani or the stapedius, but $G^6 = 12{,}288$ vibrations, and the notes above this are increased in power by contraction of the stapedius, and diminished, or even completely lost, by contraction of the tensor tympani. The explanation of these phenomena Lucæ finds in the changes of pressure which take place in the labyrinth, the tensor tympani forcing the base of the stapes inwards towards the vestibule, and the stapedius drawing it out from the vestibule. He also finds that during contraction of the tensor a high, sharp, subjective noise is experienced, while contraction of the stapedius produces a low, subjective roaring.

Exact experiments have shown that the consonant sounds, which are so important for understanding speech, correspond with the lower and higher notes of the scale. In diseased ears some will be found that perceive the lower notes best, some that perceive the higher notes best, and these two conditions Lucæ names low-hearing and high-hearing; in testing such ears with whispered words, it is found also that low-hearing is associated with a diminished perception of the higher consonant-sounds, while high-hearing is associated with a diminished perception of the lower consonant-sounds and the lower vowels.

Abnormal low-hearing is found with rheumatic facial paralysis; abnormal high-hearing where the membrana tympani has been largely destroyed, and specially marked where in addition to this loss both hammer and incus have come away and the stapes only remains. Cases of catarrh of the middle ear offer instances of both high and low hearing. Abnormal low-hearing is generally found in cases of genuine catarrh of the middle ear, with increase of secretion, closure of the Eustachian tube, and abnormal depression of the membrana tympani. Sometimes, however, it is found without increased secretion or change in position of the membrane. All of the cases of low hearing in catarrh of the middle ear are characterised by one symptom, namely, that the inflation of air increases the hearing distance for both the watch and the voice. Low-hearing is sometimes found in purulent inflammation of the tympanum with or without perforation, and is probably due to an inflammatory retraction of the tensor tympani, or to a secondary inflammation of the inner ear.

Abnormal high-hearing is observed in those cases in which examination shows a perfectly free middle ear with a membrana somewhat drawn in; such cases, after inflation of the middle ear, show an improvement for the watch, but a diminution for the speech, and the prognosis has been heretofore unfavourable.

Lucæ has endeavoured to simplify the methods of testing for these two forms of ear-disease, and recommends for testing in low-hearing the tuning-fork C = 128 vibrations, or else a tuning-fork capable of being tuned to different notes by means of sliding weights on its arms. For testing high-hearing he recommends the sounds of the watch, provided that its ticking is composed of the highest notes, or better still a König's steel rod, $G^6 = 12{,}288$ vibrations.

These functional disturbances of the ear, namely, high and low hearing, Lucæ refers in the great majority of cases to disturbances of accommodation, caused by primary or secondary insufficiency of the two tympanic muscles; generally, however, this insufficiency is secondary to some disease of the tympanum.

For general treatment of these cases he advises protection of the ear from noises as far as possible, since the affected ears always show a hyperæsthesia for one or the other class of tones. The local treatment required is that directed to the tympanic disease, which is generally catarrhal inflammation of some form. In this local treatment of low-hearing, the inflation of air into the tympanum is the chief agent, and is proved by experiment to force outwards, not only the membrana tympani, but also the whole chain of ossicles with the stapes. The same effect can also be produced by the removal of air from the meatus by suction. For the inflation of the tympanum Lucæ thinks that a very gentle stream of air through the catheter is better than either Politzer's or Valsalva's method of inflation. For suction on the meatus he uses a flat air-bag, which can be connected with the meatus by a rubber tube; for governing the amount of negative pressure used, the air-bag is compressed by a certain weight, from 100 to 200 grammes; the rubber tube is then connected with the meatus, and the weights are removed from the bag. This suction is continued for five or ten minutes, and repeated from two to six times a week. By this suction, thus continued for some minutes, the results are better than in cases where it is used only for a moment, as with Sieglé's speculum

The local treatment in instances of high-hearing is exactly the opposite of that for low-hearing. Here the inflation of the tympanum and negative pressure in the meatus are contra-indicated; but positive pressure in the meatus is in place. This Lucæ applies in the same manner as he does the negative pressure, only reversing the process, thus allowing the weights to force air into the meatus instead of withdrawing it from the meatus.

High-hearing is often found in the cases of sclerosis or hypertrophic inflammation of the middle ear. Of late years several authors, notably Weber-Liel, have referred this disease to an affection of the tympanic muscles, especially the tensor tympani, and have advised tenotomy of the muscle. This operation Lucæ does not approve, as he considers that the trouble is not a retraction but an insufficiency of the tensor muscle.

The subjective noises which exist with both high and low hearing are found to be of the same character as those produced in the healthy ear by the contraction of the two tympanic muscles, namely, a high sound with insufficiency of the stapedius, a low sound with insufficiency of the tensor tympani, and the positive or negative pressure in the meatus, according to the principles above given, relieves them.

Lucæ's article may be summed up as follows: (1.) Low-hearing, diagnosticated from the fact that a low tuning-fork is heard at a greater distance than normal, while the higher notes of a König's rod are not heard so far as normal, which is due to insufficiency of the stapedius muscle, or, in other words, to retraction of the tensor tympani; for treatment, negative pressure in the meatus is indicated. (2.) High-hearing, diagnosticated from the higher notes of the König's rod being heard farther than normal, while the low notes of the tuning-fork are not heard as far as normal, which is due to insufficiency of the tensor tympani or retraction of the stapedius; for treatment, positive pressure in the meatus is indicated.

ABOUT BOOKS.

A Course of Lectures on Physiology: as delivered by Prof. Küss at the Medical School of the University of Strasbourg. Edited by Mathias Duval, M.D., formerly Demonstrator of Anatomy at the Medical School of Strasbourg, Adjunct-Professor of the Medical Faculty of Paris, &c. Translated from the Second and Revised Edition by Robert Amory, M.D., formerly Professor of Physiology at the Medical School of Maine, &c. Illustrated by 150 Woodcuts inserted in the Text. Boston: James Campbell. London: Baillière, Tindall, and Cox. 1875.

This new manual of physiology deserves the attention of English students—firstly, because it is the most concise text-book; secondly, because in it the relations of physiology to histology are very carefully presented; thirdly, because it is not a mere compilation; and fourthly, because, although a translation, the rendering, if not perfect, is sufficiently clear to give the author's views with distinctness. There are some who will perhaps object to the prominence given to the views peculiar to Professor Küss; but we are of opinion that the positive teaching of an eminent original investigator like Küss is worth much more than a careful compilation, and the general doctrines of physiology are all embodid in this course of lectures.

The first part is devoted to general physiology, and of course contains a description of the various kinds of cells, or, as Küss prefers to call them, globules. He begins with epithelial cells, or globules, and then passes at once to nerve-cells, after which come the blood-globules, the embryonic cells being reserved till the last. Although at first sight this order seems unusual, it is by no means unnatural, as will be seen by those who take the trouble to refer to the work. We then get the nervous system in the second part of the work. The third is occupied by the contractile elements, muscles and their appendages; the fourth, by the blood and its circulation; and the fifth, by a general view of epithelial globules and epithelial surfaces. Next we have the digestive system, after which a separate part is devoted to the pulmonary mucous surface, respiration, animal heat, and phonation. This part we have read with unusual interest. Its first chapter is devoted to the anatomy of the respiratory surface; the second to the mechanical phenomena of respiration, among which some of the functions of the air-passages, such as coughing and sneezing, are treated of. Then the physical and mechanical consequences of respiration on the parts engaged as well as the adjacent regions are separately considered. The chemical phenomena of respiration occupy the next chapter, and this is followed by one on the influence of the nervous system on respiration. Then we have, in a separate division of this part, animal heat, and in another, the larynx and phonation. This last is exceedingly clear and concise, and differs considerably from several current notions. Here, as almost everywhere, the views of the most recent writers have been thoroughly digested. The eighth part consists of three chapters on the external integument. In the second of these the vexed question of absorption by the skin is considered. Küss is evidently opposed to the theory of absorption. In Colin's experiment of causing water impregnated with cyanide of potassium to drip for hours upon the back of a horse, he thinks the percussion destroyed the sebaceous matter and so permitted the poison to pass through the skin. He tells us that at Vienna patients have remained "in a bath for weeks and months without any sensible absorption taking place, the patients continuing to experience thirst, and being obliged to swallow as much liquid as if they had lived entirely in the air." The American editor, however, Professor Amory, is inclined to take an opposite opinion, as he thinks that his own experiments seem to show that potassium bromide can be absorbed. His experiments are fully detailed in the valuable work on the Bromides by himself and Professor Clark, of Harvard, which was reviewed in THE DOCTOR for June, 1872. Difficult as it is to believe in the absorption of liquids by the cutaneous surface, there is no doubt that the skin is easily permeable by gases, from which fact some authors imagine that cutaneous absorption is sometimes to be explained by decomposition between the acids of the perspiration and the medicaments employed setting free volatile substances. It is, however, a question whether the friction employed may not cause the substances to enter the system by the orifices of the sudoriparous and sebaceous glands.

The ninth part consists of a lucid account of the organs of the special senses; of these the sense of sight is treated of most fully. The tenth and concluding part of this admirable text-book is devoted to the uro-genitary system and embryology.

The work is furnished with an index, and abundantly illustrated. We may add that the edges are cut, and the get-up altogether reflects credit on the publisher.

Lectures on Pathological Anatomy. By SAMUEL WILKS, M.D., F.R.S. Second Edition. Revised by W. MOXON, M.D. London. 1875.

DR. WILKS's work, which originally appeared in 1859, has been brought down to the present date by Dr. Moxon, his successor in the Chair of Pathology at Guy's Hospital. The work remains essentially a reflex of Guy's Hospital Museum, and it is from the records of Guy's Post-Mortem Department that Dr. Moxon, since he has had charge of it, has drawn much of the new material with which he has enriched the volume. This was following in the wake of the original author, who so long taught morbid anatomy at Guy's, where he himself performed about 3,000 autopsies. The original form of the work remains, and there are seven excellent steel plates. Dr. Wilks is gifted with a clear, forcible, and agreeable style, so that his work is very easy reading.

True to his practical character, Dr. Wilks plunges at once *in medias res*, and dispensing with any sketch of general pathological anatomy, commences his work with Diseases of Bone. Then follow those of Joints, Bursæ, Tendons, and Muscle. This portion of the work we have read with extreme interest, and it well illustrates the author's original and independent methods of investigation. As an illustration we may mention the changes in cartilage usually spoken of as "erosion," and mostly ascribed to rheumatic arthritis, but which Dr. Wilks considers a mere sign of wear. He says: "A man has generally not reached his thirty-fifth year before his cartilages, like his aorta, show signs of being the worse for wear. The parts which reveal the change are those most pressed upon in use, such as the prominences of the condyles of the femur and the corresponding parts of the tibia; the patella has also a very special liability." The change is believed by our authors to be the result of repeated irritations imperfectly recovered from through insufficient supply of blood, cartilage being evascular like the elastic coats of arteries. The following paragraph is worthy of attention in this connection:—

"Sometimes the cartilage when so affected is said to be ulcerated, and we have often seen inexperienced persons misled by it when examining joints in rheumatic fever. Finding acute synovitis with liquid exudation and lymph in the joints associated with this degenerative change, they set all down alike to the rheumatic fever, and describe this as having caused ulceration of the cartilages; but this is certainly an error. The change found in such cases is exactly the usual erosion on the worn parts, and corresponds always in its extent with the elderly age of the subject; also, when other joints not inflamed in the same case are examined, they present the same erosion."

"Thus, to give one example out of many, a bricklayer's labourer, of thirty-five years of age, suffered a severe accident, crushing his leg, so that amputation of the thigh was required immediately after his admission to Guy's: we found the cartilage of the knee-joint much worn by this erosive process. On questioning the man he declared that he had never experienced the slightest sign of disorder in the knee; his occupation consisted usually of carrying hods of bricks up a ladder, and he had no idea that his lost knee had any fault about it; it had, indeed, always served him so well that the poor fellow would hear of nothing against it."

Turning to the "Diseases of the Air-Passages," we find that the authors have met with numerous cases of acute laryngitis in children who had swallowed boiling water or acrid poisons; but they remark that the suffocation thus produced does not indicate a complete choking of the passage, but is due partly to spasm, and perhaps to paralysis of the glottis, for when a muscle is inflamed it is paralysed, and this same explanation is extended to acute inflammation coming on in the course of chronic disease. The authors have never seen the trachea solely affected, and in bronchitis they advise opening the ramifications of the bronchi, as there is more there to account for the symptoms and death than in the larger passages. In croup they believe that the larynx, as well as the trachea, is always affected, and, in severe cases, the bronchi also. Diphtheria is treated amongst "Diseases of the Fauces," so that the authors would seem to recognise a distinction between croup and diphtheria; but they say (page 359), "we have often found in cases of sporadic croup the false membrane forming patches on the soft palate and tonsils." Pleurisy and pneumonia are considered at length, as is necessary to such important subjects; and here we should state that the part of the work treating of the lungs is entirely due to Dr. Wilks himself, and may therefore well be commended to special attention. In this section there is a full and careful consideration of hypertrophy, atrophy, condensation, hyperæmia and congestion, apoplexy, œdema, pneumonia (lobar, lobular, pyæmic, typhoid, hypostatic, chronic, cirrhosis), phthisis, syphilis, pigment, and morbid growths.

As might be expected in a book representing the teaching at Guy's, there is a very carefully-written section on "Diseases of the Supra-Renal Bodies;" and as attention has been recently directed to Addison's disease by a course of lectures at the College of Physicians, we turned to this chapter with considerable interest. It is very condensed, and yet in it the balance is evenly held between the opposed theories of this disease, which is shown to be nearly always associated with more or less of tuberculous disease of the lungs, while Dr. Wilks describes the post-mortem appearances found in the supra-renal bodies in a way that well illustrates the tuberculous nature of the complaint. The scattered tubercles sometimes found in the capsules in general tuberculosis are, however, of no practical importance as regards these organs, no symptoms being thereby produced. Dr. Wilks has met with inflammation of the capsules produced by suppuration in the neighbourhood. The other diseases of these bodies described are apoplexy, adenoma, tumour, cancer, and fatty change.

We have said enough to show the reader that Dr. Wilks's book may be referred to with confidence, as being full of practical information on the morbid anatomy of all the various organs of the body. It is the mature product of a great pathologist, who has had unrivalled opportunities of investigating his favourite subject.

AT THE SOCIETIES.

AT THE ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Tuesday, May 25th.

Sir James Paget in the Chair.

ON THE TREATMENT OF NASAL LUPUS BY EXCISION.

By Mr. John Gay.

The author's object was to show that lupus exedens is a topically malignant form of ulceration; and that the alleged cures of this affection by constitutional means are probably due either to errors in diagnosis or to the inclusion under the generic term "lupus" of forms of disease with which, typically, it has no natural affinity or alliance. In its objective features it most resembles epithelioma and rodent ulcer. Mr. Hulke's investigations have shown that the latter affection is essentially a local disease, and can be eradicated by the knife; in this respect, and in the absence of glandular infection, lupus resembles it. But rodent ulcer is chiefly a disease of age, lupus of youth; and the attenuated edge of the rodent ulcer close to healthy skin offers a marked contrast with the thick everted edge of lupus, surrounded by its pink zone of vascular injection. From epithelioma lupus is distinguished histologically, as well as by the extent of the ulceration and the presence of lymphatic implication. The pathology of lupus consists in the infiltration of the corium with large oval or round nucleated cells, establishing a raw surface which is more or less covered by the degraded epithelial elements; the subjacent fat, sweat- and hair-follicles are completely destroyed, so that the surface becomes depressed. Like rodent ulcer, essentially a local disease—for it can not only be completely eradicated by the knife, but its poison is only topically virulent, and lupoid sores are not met with at a distance from the primary ulceration—it may and certainly does occur in persons with some of the ordinary general systemic indications of struma, but not, so far as Mr. Gay has observed, with those of strumous joints or glands. The conclusion to which dermatologists have come with regard to the influence of systemic remedies is favourable to this view of its essential character, for they have been compelled consistently to deny to drugs any therapeutic influence over an established lupoid sore. The only principle upon which it can be successfully treated is that of eradication by topical means. Caustics, however, have repeatedly failed, apparently from a want of a definite aim in using them. There has been no clear mode laid down of ascertaining the depths to which the virus of lupus has penetrated from its ulcer surface, consequently the amount of tissue that has to be destroyed in order to ensure its perfect eradication has been a matter of conjecture; but the limits of the poisoned tissu may doubtless be satisfactorily determined, these not being so wide as to be beyond the reach of the destructive powers of caustic potash. These limits are especially marked by the pink vascular zone surrounding the thickened margin of the ulcer; and the caustic should be applied to destroy not only the base of the ulcer, but all the parts within this zone. The objection to caustics, however, and the great advantage of excision arise from the fact that, in "nasal lupus" especially, in which disfigurement follows in the event of its being removed by caustic, cicatrisation, or an advance towards it, must be allowed to take place before any restorative operation of a plastic kind can be done—one of the most important objects in the treatment of cases of this kind. If the removal of the diseased parts be made by the knife, any such operation that may be deemed expedient may be simultaneously done, and thus tissue is saved, the loss of which would be incumbent on the use of caustic. The paper concluded by the relation of three cases in which this method of excision was adopted. The first was a young man in whom the ulcer had been unsuccessfully treated with pernitrate of mercury; excision was practised, and a plastic operation performed to make a new nose. The results of the plastic operation were marred by erysipelas, but the patient wears an artificial nose. The second case, also a male, aged 23, was one in which the ulceration had perforated the right ala of the nose, and had been apparently treated by caustics with success. The edges were cut away, and a flap of skin from the cheek brought over the raw surface. The last case was a most remarkable one; it was that of a young lady 27 years of age, who showed lupoid cicatrices in the neck; the tip of the nose, cartilaginous septum, and the alæ were destroyed by the disease, which invaded the contiguous mucous membranes. Mr. Gray removed the whole of the diseased surface to within a quarter of an inch of the nasal bone, and laterally to the naso-labial sulci, thus exposing a large triangular space, which was covered in by skin-flaps dissected from each cheek, the tip of the nose and septum being formed by a club-shaped portion of the centre of the upper lip. There was perfect union, and six months after operation there had been no return of the disease, the nose being, however, somewhat flattened.

Mr. **Marshall** spoke of the galvanic cautery, which he had himself used with tolerable success. Its great advantage was that the diseased structures, including the thickened margin, with its characteristic rosy halo, could be readily extirpated.

Dr. **Sparks** advocated the employment of solid nitrate silver, which is readily bored into the diseased tissues, and does not injure the healthy parts. He believed that Hebra now used this method solely, having given up potassa fusa and chloride of zinc.

CASE OF DOUBLE FACIAL PALSY, WITH LOSS OF TASTE IN THE FOREPART OF THE TONGUE.

By Dr. Robert M'Donnell, of Dublin.

This case was of physiological interest, as tending to prove that the so-called "gustatory" nerve was a compound nerve endowed with the function of taste by fibres derived from the chorda tympani. The patient was a young healthy man, of 24 years of age, in whom complete paralysis of the portio dura of the seventh pair of nerves followed exposure to cold and wet, the left nerve being first affected. There was no evidence of any central lesion of the brain, nor were any other cerebral nerves engaged. There was complete loss of the sense of taste in the forepart of the tongue, which the author attributed to paralysis of the chorda tympani. Tactile and thermic impressions were perceived in the forepart of the tongue quite as distinctly as in healthy persons. The defect in taste persisted longer than the motor paralysis. The secretion of saliva from the sublingual glands was not excited by irritants which produced copious flow in healthy persons. The case was chiefly of interest as supplementing one recorded by Dr. Althaus in vol. lii. of the "Medico-Chirurgical Transactions," in which there was paralysis of the fifth pair on both sides, and in which the sense of touch in the tongue was lost, that of taste persisting.

ON THE SO-CALLED PARTIAL DISLOCATION OF THE HUMERUS.

By Edmund Owen, F.R.C.S.

The author endeavoured to show by the aid of four recent dissections that the cases which have been recorded as examples of true partial dislocation of the humerus are due to the effects of disease rather than of accident. The case instanced by Sir Astley Cooper in his "Treatise on Fractures and Dislocations," and that described by Mr. John Soden in the "Transactions" of this Society, vol. xxv., 1841, which have hitherto been considered as evidence that this form of displacement may result from "injury," were especially referred to as lending support to the opinion advanced by the writer. The paper was illustrated by specimens.

Mr. **Gascoyen** said that all these joints when examined showed evidence of chronic rheumatic inflammation; and other joints than the shoulder were in some cases found to be similarly affected. He concurred with Mr. Owen as to the non-existence of partial dislocation of the humerus from injury, for he was quite unable to see what forces could hold the bone in position when it was dislocated upwards.

Mr. **Gay** contended that the changes met with in these joints were secondary to the dislocation; and he had certainly met with cases in which partial dislocation had followed direct injury to the shoulder.

Mr. **Marsh** said that no doubt many of these cases were examples of chronic rheumatic arthritis following rupture of the long tendon of the biceps; but he fully believed in the existence of a partial dislocation of the humerus, and thought the bone would be held in position by the biceps tendon, which must be displaced when such dislocation occurs.

Mr. **Owen**, in reply, said it was singular that he should have met with six cases (post-mortem) in two years, often with both shoulders dislocated, and in two with similar chronic inflammation of the knee. In four of his specimens the tendon of the biceps was ruptured.

AT THE STATISTICAL SOCIETY OF LONDON.

Tuesday, June 15, 1875.

ON THE EFFECT OF MIGRATIONS UPON DEATH RATES.

By Mr. T. A. Welton.

The author some time since read a paper before the Institute of Acturies, in which he showed, from the statistics of the years 1851-60, that the mortality amongst females resident in London aged 10 to 35 years was exceedingly low, whilst that in the rural districts around London, to the distance of about seventy miles, was at the same ages exceptionally high. He divided these rural districts into an inner ring and an outer ring, and subdivided these rings into thirteen parts, and finding a great degree of regularity in the phenomena, was led to attribute them to some cause likely to operate over the entire area. This cause, in his opinion, was the undisputed presence of vast numbers of country girls in London, principally in domestic service, and the probable circumstance that these, in case of serious illness, would in most cases return to the homes of their parents in the country, and there die. He found similar but much less striking phenomena in the case of males, and this he supposed might arise from the greater independence of that sex, who, soon after their settlement in London, are likely to form a domestic establishment, however humble, of their own.

A recent suggestion by Mr. N. A. Humphreys, that the more probable explanation of the facts was that women in service in London enjoy more favourable conditions as to health than if resident in humble rural homes, led Mr. Welton to place the leading results of his investigation before the Statistical Society, and to support them by fresh calculations based upon the statistics of 1861-70.

He showed, for instance, that the death-rates amongst young women aged 15—25 and resident in the worst districts of London, such as Whitechapel and St. Giles's, were considerably below the national average. He also showed that whilst tubercular consumption was not particularly fatal in London to persons of either sex aged 15—25, this disease carried off a very large number of women between those ages in the surrounding rural districts.

The average mortality of females in the ten years 1861-70 in London and in Suffolk served to confirm the figures for the earlier decade, being as under:—

Death Rate per Thousand Living at the following Ages.

	In London.	In Suffolk.
0— 5...........	76·6	45·4
10—15...........	4·1	4·8
15—20...........	5·1	7·6
20—25...........	6·2	9·2
25—35...........	8·8	10·0
55—65...........	33·6	21·1
65—75........ ...	67·6	47·0

And similar facts were shown to be derivable from the statistics of seven other counties.

Under these circumstances, Mr. Welton suggested two inquiries: one as to the birthplaces of those dying in London and the other as to the history of those who die between the ages of 15 and 25 in a few selected rural registration districts. Such inquiries, if made, would effectually resolve the question at issue.

Another aspect of the matter was shown to be the great disparity between male and female death-rates at the ages 15—25, according to the locality under observation, towns showing low female death-rates and rural districts high ones. In London, at the ages 15—20, the average death-rates for 1861-70 were males 5·8, females 5·1 per thousand; but in Suffolk the figures were males 5·7, females 7·6 per thousand; in Oxfordshire—males 4·4, females 6·3 per thousand, and in other rural districts the results were similar.

IN THE LABORATORY.

TEST FOR CODEIA.

ACCORDING to R. Calmberg (*American Journal of Pharmacy*) codeia treated with concentrated sulphuric acid acquires a rose-red colour, changing in a few days to a violet, or more rapidly, on addition of a fragment of ferric chloride; if solution of ferric chloride is used, an olive-green colour is obtained, changing to violet after a few hours; in both cases a bluish precipitate is formed after some time, while the supernatant liquid remains violet.

TEST FOR MORPHIA.

ONE of the most delicate tests for morphia is that proposed some years ago by A. Husemann. The morphia, or its salt, is left in contact with concentrated sulphuric acid for twelve or fifteen hours, or heated with it to 212° F. for half an hour, or to 325° for a few moments. On the addition of a little nitric acid, or of a nitrate or chlorate, chlorine water, chlorinated soda, or ferric chloride, a beautiful bluish or reddish violet colour is produced, which soon passes into deep blood red, and gradually becomes paler. Small quantities of colouring matter do not interfere with the reaction, if the chlorinated reagents are selected in applying the test.—*American Journal of Pharmacy.*

NITRATE OF PILOCARPINE.

IN a former number we mentioned that the alkaloid of jaborandi—pilocarpine—had been prepared, and described the process employed by Mr. Gerrard. He then stated that, judging from the characteristics of the alkaloid, it seemed somewhat doubtful to him whether it could be made to assume the crystalline condition. From a further communication of Mr. Gerrard's to the *Pharmaceutical Journal*, we learn that he has succeeded in obtaining crystals of the nitrate. He neutralised a portion of the alkaloid with nitric acid and set it aside; in twenty-four hours the solution had yielded a mass of fairly well-defined colourless crystals, with a substratum of light brown coloured matter. The salt was submitted to Dr. Ringer for the purpose of testing it therapeutically. It was found to produce the usual effects of jaborandi.

Mr. Gerrard subsequently succeeded in crystallising the hydrochlorate.

A VEHICLE FOR CHLOROFORM.

PROF. JAILLARD says that in order to prevent the irritating action of chloroform on the mucous membrane of the mouth it is only necessary to administer it in milk, which, if wished, can be sweetened.

JOTTINGS FROM JOURNALS.

THIRD DENTITION.—The Paris journals relate the occurrence of a third reproduction of all the teeth at the Hospital of Incurables, in the person of a woman aged ninety years. The first reproduction ensued at the age of forty-seven, the second reproduction at the age of sixty-three. Partial reproduction occurs occasionally, but the record of a complete dentition at a period so far advanced is in fact perhaps unique.

TETANUS FROM A WOUND INCURRED IN THE PERFORMANCE OF A POST-MORTEM EXAMINATION.—The case is related by Dr. Vincenzo Palmesi. Dr. Rocco Zaccheo was the unfortunate victim. The malady was occasioned by a puncture which was casually inflicted during the autopsy of a tubercular subject in the great hospital of Milan. Dr. Zaccheo, who was a young physician of the greatest promise, died in the midst of frightful spasms. The forceps ought always to be held in the left hand, while the scalpel is wielded by the right. Gutta percha or indiarubber gloves might be worn with advantage during autopsies by the operator. Every possible proper precaution ought indeed to be resorted to but should a wound be actually inflicted, the part ought to be instantly washed, sucked, and the place effectively cauterised with a stick of the nitrate of silver.—*Il Racogliatore Medico.*

GONORRHŒA INJECTION.—Dr. Haberkorn, of Berlin, recommends the following, in teaspoonful injections, thrown into the urethra two or three times daily—

℞ Quinæ sulphatis, gr. vj.;
Glycerinæ, ʒij.;
Aquæ, ʒvj.;
Acidi sulphurici diluti, gutt., v. M.

Itch Ointment.—

℞ Acidi arsenici, gr. ij.;
Potassæ carbonatis, gr. x;
Solut. alcohol, saponis, ʒj.;
Aquæ ad ℥j. M.

is very warmly recommended by Dr. F. W. Clemens. It is to be rubbed twice daily on the affected parts, and cure follows in a few days afterwards.—*Allgemeine Medizinische Centralzeitung.*

CHILBLAINS.—Prescribe

Cupri sulphatis, gr iv.;
Aquæ, ℥j. M.

Apply often.—*Philadelphia Med. and Surg. Reporter.*

STERILITY.—Among the causes of human sterility Dr. M. Sims mentions the projection of the neck of the uterus into the vagina. If the neck, says he, projects half an inch, sterility is probable, if one inch it is almost certain, if one inch and a half it is inevitable. Now, Dr. Berruti Giuseppe, of the University of Turin, maintains that in two women out of three the neck of the uterus projects naturally half an inch (il collo dell' utero proemina in vagina per un mezzo pollice). The subject is one of much moment, and the disparity of opinion, considering the importance of the interests at stake, merits the most careful consideration. —*L'Independente del Torino.*

MORALS OF CRIMINALS.—Professor Cesare Lombroso, speaking on the morals of criminals, is far from hopeful; he is indeed anything but hopeful, citing from English sources that it is easier to transform a wolf into a dog than a scoundrel into an honest man. The subject is too extended here to go fully into, but Dr. Lombroso places in prominence the very curious circumstance that the worst criminals, finding it their peculiar interest to simulate honesty, are the best conducted in prisons.—*La Salute di Genova.*

ESMARCH'S METHOD.—M. ~~Dutrait, interne des hopitaux, passes some useful remarks on the method of Esmarch. He describes~~ a modification of Esmarch's method, as introduced by M. Mollière. ~~This~~ consists in placing, in addition to the general compressing the limb by bandaging, a further bandage a few centimetres above the seat of the intended operation. In this way a space full of blood is included in such wise that when ligatures are about to be placed on the great vessels, the outlets of the smaller arteries and veins are more readily detected, and secondary hæmorrhage averted.—*Lyon Médical.*

POLYPUS OF THE RECTUM.—A very singular case of polypi of the rectum, which, large and small, amounted to some hundred, was treated successfully by M. Fochier, of Lyons, in the hospital of La Croix Rousse. The subject was a young girl of twelve years of age, and the tumours, projecting as they did when the bowels were relieved, occasioned extreme distress and suffering. When the case came into hospital, the tumour that protruded from the anus during the period of defæcation was as large as a fist. The patient being placed in a state of anæsthesia the biggest polypus was removed by a multiple ligature. The after-pain only lasting until the evening, and the sufferer doing otherwise so well, the operator was encouraged, what by means of a polypus forceps or ligature or the simple fingers, to remove quite a number of tumours actually implicating four-fifths of the surface of the rectum. There was no permanent contraction, however, and the patient up to the period of the record continued to amend. It should be mentioned that after each operation the rectum was cleared out by detersive and disinfecting injections, while the general stamina was fortified by means of a good regimen, coupled with iron.

FISTULA.—~~M. D. Mollière takes up~~ afresh in the pages of the *Lyon ~~Médical~~* ~~the subject of the treatment of~~ fistula of the ~~anus by means of~~ elastic or india-rubber ligatures, ~~as originated by~~ Dittel, and as so successfully ~~followed up~~ by Allingham, ~~as reported in the *Medical Press and Circular*, in regard of his practice~~ in the hospital of ~~Saint Mark~~. M. Daniel Mollière, ~~who is~~ surgeon of the Hotel-Dieu de Lyon, thus sums up the elastic ligature in ~~respect of~~ the treatment of fistula :—

1. There is little or no pain in connection with the operation.
2. There is no hæmorrhage.
3. Recovery is rapid.
4. The patient is not confined to bed, but may go out at once if he like.
5. The most delicate person may be operated upon.
6. Anæsthetics are not required.
7. There is very little suppuration.
8. And lastly, even when the operation has been begun with the bistoury, it may be bound up with the elastic ligature. Once the ligature is in place, the two ends first passed through a little ring of lead, are put on the stretch. At the maximum of tension, the ring is crushed with a stout pair of pincers, in such wise that the fistula is included, strangulated in fact, within an elastic noose, and the tension maintained until the ligature cuts through the parts and is discharged.

NOTES, NEWS, AND GOSSIP.

STRYCHNIA AND ARSENIC-EATERS.—Dr. H. C. Mory furnishes the *Pacific Medical and Surgical Journal* with the history of a strychnia-eater. The man, described as about fifty-two years of age, after long and continued debauch in a condition bordering on delirium took a strychnia bottle, poured some of the alkaloid into his hand and threw it into his mouth as carelessly as though it were salt. He repeated the dose until he became perfectly sober. Dr. M. says he has frequently seen him take it—about 20 grains at a time—and in every instance every appearance of dissipation would disappear in a short time.

Dr. H. M. Fiske informs the same journal that a fellow-student of his after an extended spree of two or three weeks' duration would sober himself by arsenic. He says he would commence with half-an-ounce of Fowler's solution, repeat the dose in an hour and continue it at the same or shorter intervals [till he had swallowed the enormous quantity of five or six ounces. "He would then be apparently as fresh and vigorous as though he had never been intoxicated, from two to five hours being all the time generally necessary to bring him to his normal condition."

THE ACCURACY OF CLINICAL INSTRUMENTS.—Our thermometers may be tested at Kew, but weeks are necessary for the purpose, and other instruments, such as the urinometer, should be correct. The *Lancet* suggests that the Clinical Society might make arrangements to test any instrument sent for the purpose. Let us hope the society will do so.

RECENT DEBATES UPON ALCOHOL.—Dr. Willard Parker, of New York, asks the following very important questions : Does alcohol, when injected into the body, become assimilated and produce force ? Why is the temperature lowered when alcohol is injected ? Why do all persons in very high latitudes find that they can not take alcohol when the cold is very intense ? How is it that persons who have to do very hard work so often break down when they attempt it on beer or spirits ? And how is it that insurance companies find the average life of teetotallers is about 64, whilst that of drunkards and moderate drinkers is 35 years and 6 months ? How is it, asks Dr. Willard Parker again, that fifty per cent. of the idiots in asylums and idiotic schools have drunken parents ?

These are, indeed, hard nuts to crack for the school of Todd and his most able disciple, Anstie ; and this seems to have been the opinion of six medical gentlemen who took their stand in Exeter Hall, London, recently, against alcohol.—*American Medical Weekly.*

A GOOD EXAMPLE—The Japanese Government have ordered that any druggist having in his possession sulphate of quinine or iodide of potassium in an adulterated state shall be fined 50 yan (= £5).

FLUID LIGHTNING.—Under this name some cute Yankee has been selling a preparation for subduing pain, consisting simply of alcohol, containing about 10 per cent. of essential oil of mustard, together with some oil of sassafras and oil of peppermint. The oil of mustard acts as a counter-irritant, and the tingling produced no doubt suggested the startling title of the compound.

OBITUARY.

ASHTON.—On the 11th May, at Walton-le-Dale, Lancashire, Henry Ashton, L.R.C.P.Ed., aged 62.

BARNES.—On the 7th May, at Clare, Suffolk, John Barnes, Surgeon, aged 72.

CARDELL.—On the 2nd June, at Wincanton, after a short illness, Geo. Cardell, M R.C.S., and late Assistant-Surgeon Army Medical Staff, aged 41.

CASSON.—On the 1st June, at Anlaby Road, Hull, F. W. Casson, M.R.C.S.E., aged 56.

CHAPMAN.—On the 30th May, at Devon House, Isleworth, H. W. Chapman, F.R C.S.E., aged 67.

CRAVEN.—On the 18th May, at Worksop, Robert Craven, Surgeon, aged 68.

GREEN.—On the 11th May, at Norwich Road, Ipswich, W. Green, Surgeon, formerly of Ixworth, aged 83.

HAINSWORTH.—On the 25th May, at Bradford, Yorkshire, Joseph Hainsworth, M.R.C.S E., aged 40.

MURPHY.—On the 25th May, at his residence, Walter William Murphy, M.D., Resident Medical Superintendent Lunatic Asylum, Killarney.

MAGEE.—On the 23rd May, at Malone Park, Belfast, Jane Eliza, widow of the late Samuel Magee, M.D., Keady, co. Armagh, aged 75.

MERCER.—On the 9th June, at Leicester Villa, Brixton, John Thomas Mercer, M.B., aged 36.

NANCE.—On the 15th May, at Eccleshall, Staffordshire, James Nance, F.R.C.S.E., aged 36.

OAKSHOTT.—On the 25th May, at Mount Verdant, Sundays Wells, Cork J. G. Oakshott, M.R.C.S.E.

PEPLER.—On the 22nd May, at Britford, Wilts, W. B. Pepler, M.R.C.S.E., aged 44.

POWIS.—On the 22nd May, at Ryde, Henry S. Powis, M.D., of Maidenhead, aged 64.

REYNOLDS.—Patrick B. Reynolds, L.R.C.S., L.K.Q.C.P.I., Medical Officer of the Claremorris Dispensary District.

RIDGE.—On the 11th June. at Dorset Square, Joseph Ridge, M.D.

SHAW.—On the 10th June, at Portland House, Battersea, George Shaw, M.R.C.S., aged 55.

SMITH.—On the 24th May, at Talbot Road, Paddington, John Nelson Smith, M.D., aged 60.

SMITH.—On the 24th May, at Talbot Road, Dr. John Smith, late of Torquay and Calcutta, aged 69.

SPURGIN.—On the 20th May, at Ipswich, Chas. S. Spurgin, M.R.C.S.E., aged 76.

STEEL.—On the 10th June, at Forfar, William Steel, M.D., aged 78.

STEELE.—On the 2nd June, at Wishaw, Lanarkshire, James Steele, M.D., aged 61.

THOMAS.—On the 20th May, at Kemp Town, Brighton, Griffith Robert Thomas, M.R.C.S.E., aged 40.

TRUMAN.—On the 12th May, at Aborotum Street, Nottingham, Beckit Truman, M.R.C.S.E., aged 72.

TURNOCK.—On the 14th May, at Leek, Richard Turnock, M.R.C.S.E , aged 59.

WILLIAMS.—On the 31st May, at High Street, Bromley, Kent, Edward A. Williams, M.R.C.S.E., aged 74.

WOTTON.—On the 15th June, at Montague Place, ssell Square, Henry Rendell Wotton, late of Cavendish Square, his 65th year.

WOAKES.—On the 9th May, at Luton, Edward Woakes, M.R.C.S.E. aged 78.

NOTICES.

The Doctor is published Monthly, price Sixpence, and sold by all booksellers. It is also supplied by the Publishers named at the foot of the last page.

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THE DOCTOR.

LONDON, AUGUST 1, 1875.

Multum in parvo.

EDITORIAL BROTHERHOOD.

We have sometimes sighed as we remembered that while our English medical editors are continually urging upon their readers to act towards each other as professional brethren, they should never set an example of the virtue they so constantly inculcate. While political and literary journalists possess considerable *esprit de corps*, medical editors seem destitute of any bond of union, and, indeed, are usually so hostile to each other, that an impartial observer might well exclaim,—"Behold how these *editors hate* one another!"

Thankful, however, should we be that this hostility does not prevail in all countries. On the Continent it is seldom evinced, and America has lately presented us the agreeable spectacle of a meeting of the Medical Editors' Association, where good fellowship and a desire to use the press to elevate the profession were abundantly manifest. The President of the Association, Dr. Edgar, delivered a forcible address, in which he pointed out some of the evils which afflict the profession in the Western World, and enlisted his hearers in a joint effort to combat these evils, which we hope may be completely successful. Why should such united effort be impossible in England? There are glaring evils enough on which common ground might be taken, and upon which the profession is at heart thoroughly united, but respecting which we can scarcely hope for reform so long as one journal makes a point of opposing whatever another may support. Long ago did not an astute statesman put off some ardent medical reformers with "Gentlemen, first agree among yourselves what the profession really want, and then I am at your service"? Would not the same answer at the present day suffice to postpone any reform for which legislation might be needed? Not only so, but even on smaller questions—those of custom and etiquette included—there is no unanimity, and medical editors are to a large extent responsible for this. Had they done their duty as they have preached it to their readers, the medical profession at the present day would not remain an unorganised rabble.

We are induced to hope that these remarks may not be unseasonable by the fact that during the last year or two great changes have taken place in the staff of nearly every medical journal in England. James Fernandez Clarke, for more than forty years a moving spirit among medical journalists, has since our last issue "shuffled off the mortal coil." Dr. Anstie, who founded the *Practitioner*, has not long been dead, and death and disease, and the other incidents of time, have effected equally noteworthy changes in our ranks. Considerable changes have occurred in the staff of The Doctor, but we trust that the losses we lament have been replaced to the satisfaction of our readers. From the nature of our publication we are precluded from taking a large part in the medico-political discussions that occupy our contemporaries, although on the more important questions of this kind we have not hesitated to speak out. If our words have been few, we trust they have not been without weight, and the small space at our disposal for other than practical subjects induces us to hope that our remarks on Editorial Brotherhood may be received in good part, and that a higher tone of medical journalism may henceforth prevail.

CHRONICLE.

CHRONIC AORTITIS.

M. P. Jousset has communicated to the Paris Academy of Sciences the result of his investigations into chronic inflammation of the aorta, which he regards as a frequent disease, habitually misunderstood and confounded with heart disease, or even with interstitial nephritis. The principal lesions are atheromata, milky and chalky patches, thickening and loss of elasticity of the walls, and, finally, dilatation of the artery. The inflammation may spread from the arterial lining to the endocardium, or the reverse may occur: thus arises cardo-aortitis. As concomitant lesions he mentions premature ossification of the peripheric arteries and sclerosis of the kidneys. M. Jousset speaks of two forms of aortitis—one painful, known as angina pectoris; the other, painless, or nearly so, which has been the chief object of his study.

The chronic may be preceded by an acute aortitis, and alcohol, tobacco, coffee, and tea favour the development of the disease. In all the cases observed by M. Jousset the patients were over thirty-five years of age, and either gouty or the subjects of hæmorrhoids. The principal symptoms are habitual dyspnœa, with occasional paroxysms of suffocation, which have all the characters of cardiac dyspnœa. The pulse is accelerated, and at the same time becomes small, and at length imperceptible. Cold sweats and syncope supervene. During the paroxysms the expiration is convulsive and prolonged. Sleeplessness, debility, and anæmia lead to a cachexia marked by œdema, albuminuria, and sub-delirium. Death takes place from syncope, asphyxia, or uræmic poisoning.

ASPIRATION IN PLEURISY.

Surgical interference in pleurisy has of late gone far beyond the rigid limits of common clinical experience, and we believe that, as usual, many patients have been sacrificed to the rage for trying the aspirator in all cases, suitable or unsuitable, of this common disease. Dr. Becker, of Munich, has recently done good service by discussing the question as to the use of the aspirator in pleurisy. He says truly enough that when the operation is one of necessity, for the preservation of life, there can, of course, be no question as to its propriety; but he adds with equal justice, that in most cases of pleurisy with sero-fibrinous effusion, that he is quite opposed to its use. We entirely give our adhesion to this. Even when the pleural cavity, says Becker, is so full that the heart is much displaced, as long as the respiration and circulation remain undisturbed, he would leave the cure to Nature. He contends that where the fluid has reached a certain amount, effusion ceases, and the current setting in in the opposite direction, towards the vessels, the cavity is gradually emptied and contraction and adhesion ensue. Nature spontaneously limits the amount of effusion by compressing the root of the collapsed lung, and thus so far arresting the circulation of the vessels of supply. If the physician interfere with this normal course of events, and remove the fluid before the pressure on the pleural cavity has reached a certain height, he will simply restore the circulation in the pulmonary vessels, re-establish the condition of effusion, the rough surfaces will resume their friction, and we shall have robbed the system of so much fluid.

He considers the circumstance even more grave when adhesions are existing; for, if aspiration be then made use of, the fluid speedily refuses to flow, the tube collapses, and air forces its way into the chest along the needle; and, even worse than this, the lung, when expanding, may have the alveoli dilated, become congested, hæmoptysis may ensue, and bronchitis and pneumonia be caused. There are other reasons of minor importance, such as that the risk of death from fatty heart is not removed by operating; marasmus is not relieved by it; and it often causes fresh pleurisy, whereas the chances of empyema are increased by it.

OLEATE OF MERCURY.

It seems that the oleate of mercury is at present employed greatly in the syphilitic wards of the Vienna General Hospital in accordance with the rules laid down by Professor Sigmund. Fifty-one patients affected with syphilitic skin were subjected to this form of inunction. From 15 to 30 grains were rubbed in daily by each patient. In most of the cases this treatment was commenced immediately the eruption came out, without any previous medication. In 7 cases some form of iodine had been given in addition to the inunction. Thirty-seven of the 51 cases were affected with syphilitic erythema in one or other of its several forms, and the remaining cases were those of papular eruptions.

In the fresh forms of the erythematous skin diseases the average number of inunctions necessary to the cure was eighteen, the eruption disappearing, it is said, about the twenty-first day after the commencement of the treatment; the induration at the seat of the sore as a rule being seen a week later in the cases previously subjected to a course of iodine; still more rapid was the cure when mercury had been used previously. Dr. Vajda maintains that the oleate of mercury is a more efficient preparation than the mercurial ointment, the general effect of the remedy often showing itself with great rapidity. Stomatitis was never observed, nor did this treatment give rise to eczema, and only twice to erythema. Among the fifty-one cases treated by Dr. Vajda, as above set forth, only three returned subsequently with a renewed attack of the old disease, in the form of mucous patches.

The oleate of mercury seems to penetrate the skin more readily than mercurial ointment, the time occupied for introducing equivalent quantities of each being as one to four. To testify that the effect corresponded with the rapidity of introduction, Dr. Vajda procured some fresh, clear lymph, and added to it a little oleate of mercury. In a short time he was able to show, in the still, clear, supernatant stratum of the lymph the presence of mercury, a fact which indicates the rapid transformation of the oleate into an albuminate of mercury.

THE DANGERS OF OPERATING UPON HABITUAL DRINKERS.

Sir James Paget, in his recently published Clinical Lectures, says (pp. 14 and 15): "One does, indeed, sometimes meet with habitual drunkards who pass safely through the perils of great operations; but these are rare exceptions to the rule, according to which one may reckon that the risks of all operations increase with the increasing degrees of habitual intemperance. I think you will find that a habit of slight intemperance is much worse than occasional great excesses; that regular soaking is worse than irregular carousing; probably because of the steady impairment of the blood and of all the textures to which the soaking leads. Of course you will keep your hands off notorious drunkards, unless you are driven by the stress of a strangulated hernia, or a stopped windpipe, or something leaving you as little choice as these do. But you must be on your guard to detect a good deal of drunkenness of the soaking kind, which is not notorious and not confessed. Be rather afraid of operating on those, of whatever class, who think they need stimulants before they work; who cannot dine till after wine and bitters; who always have sherry on the sideboard; or who are always sipping brandy-and-water; or are rather proud that, because they can eat so little, they must often take some wine. Many people who pass for highly respectable, and who mean no harm, are thus daily damaging their health, and making themselves unfit to bear any of the storms of life."

OVERWORK.

Roused by Mr. Greg's lecture at the Royal Institution on "Life at High Pressure," Dr. Wilks has communicated to the *Lancet* some very important remarks on Overwork. He denies that people generally are suffering from overwork, and tells us he sees half-a-dozen persons suffering from want of occupation to every one who is crippled by his labours. Among girls, so far from study or other work being injurious, he has met with numerous cases of restoration to health by the discovery of an occupation.

"When the man of business presents himself," says Dr. W., "with his nerves really over-strained, he is found to be a man of delicate or actual insane temperament. The rule, however, is, that when a patient comes before me with his nerves unstrung, hypochondriacal, and goes through the whole machinery of his body to inform me of its working, previously committing all the facts to paper lest an important one should be forgotten, that that man is getting rusty from having no occupation. Amongst many medical men for whom I prescribe, my three worst and most chronic cases are: first, that of a gentleman who has a sufficient means to prevent his caring for practice; second, that of another who has taken a partner, and who has been an idle man for two years; and a third, that of a gentleman who a few years since had a large fortune left him, and who has now become so fearful a hypochondriac, and has his nervous system so shattered, that it might be thought that he was the victim of some terrible railway accident. So marked a case of a comparatively young man running to seed, and having the animal machinery rust from disuse, I have rarely seen. It is generally admitted that, amongst men, a want of occupation is so detrimental that no demonstration of the fact is required."

Dr. Wilks proceeds to point out that, as with the muscular system, so with the brain. The best preparation for hard work is previous training. He says that the brain needs no rest, except what it gets during sleep, and even then its rest is not absolute, and that those are the happiest who have some second occupation to interest them—that is, a pursuit besides their bread-earning employment. We believe there is much truth in this, and we recommend all our professional brethren to have their hobbies as well as their practice.

NITRATE OF SODA IN DYSENTERY.

The use of this remedy in dysentery is by no means novel, Velsen having recommended it in 1819. Attention has, however, again been called to it, and the dose recommended is from 3 to 6 drachms during the twenty-four hours, and amelioration is said to occur the following day. Where the disease is entirely rectal it is more efficacious than where the cæcum is involved.

CHLORAL IN CEREBRAL RHEUMATISM.

Three cases of this formidable disease, treated by M. Bouchut with hydrate of chloral, have recovered. He gave from 3 to 6 grammes (=45 to 90 grains) in divided doses, repeated at frequent intervals until the excitement abated.

SALICYLIC ACID IN DIPHTHERIA.

In children too young to gargle, Dr. Wagner, of Fribourg, gives salicylic acid in water or wine in doses of 10 to 30 centigrammes (about 1½ to 4½ grains) every two hours. For those who are older he prescribes the following gargle:

Salicylic acid, 150 parts;
Alcohol (to dissolve it), 15 parts;
Distilled water, 150 parts.

To be used every two hours. If the solution deposits any crystals he dissolves them by warming it. He reports fifteen serious cases of diphtheria cured by this method.

A CURIOUS RESULT FOLLOWING CICATRIX OF THE MEMBRANA TYMPANI.

Dr. C. J. Blake lately reported to an American Society that a man, thirty years of age, had been under treatment for a purulent inflammation of the middle ear with destruction of the membrana tympani; the purulent discharge had been relieved, but a thin cicatricial membrane was found to have in part replaced the membrana tympani; it stretched across the anterior portion of the tympanic cavity and opening of the Eustachian tube. At a subsequent visit the patient was observed to speak peculiarly, suppressing the nasal sounds, *m*, *n*, and *ng*, and substituting *b*, *d*, and *g*. The substitution was voluntary, as the full pronunciation of the nasal sounds was accompanied by a disagreeable noise and movement in the ear.

On examination it was found that with the pronunciation of *m*, the lax cicatrix in the middle ear across the opening of the Eustachian tube moved slightly outward, on pronouncing *n*, still further, and on pronouncing *ng*, a greater and double excursion was observed. These symptoms were put an end to and the patient relieved from his discomfort by making a circular opening in the lax cicatrix. On placing in the ear a manometer having a bore one millimetre in diameter, filled with water, a movement in the manometric column was seen on the pronunciation of the nasal sounds exactly corresponding to the movements of the lax cicatrix before the opening was made. The movements moreover were found to correspond to the logographic curves of *m*, *n*, and *ng*, and proved a regularly increasing pressure in the naso-pharyngeal space and Eustachian tube from *m* to *ng*. These degrees of pressure were also found to correspond to the degree of closure of the buccal cavity in sounding the nasal tones.

With *m*, the buccal cavity is closed at the lips, with *n*, by the tip of the tongue pressing against the bases of the upper incisors, and with *ng*, by the top and back of the tongue closing the buccal cavity at its posterior end. The case suggested a further series of pressure tests to be reported later.

MORE ABOUT JABORANDI.

Drs. Tizzoni and Chiocconi have made some interesting experiments on this drug, which are detailed in the *Rivista Clinica di Bologna*. They consider the plant as simply diaphoretic and sialogogue. In all their experiments they failed to observe either the increased bronchial secretion noticed by Gubler and denied by Cantani; the nasal secretion and lachrymation spoken of by Robin; or the diuresis observed by Cantani; the dilation of the pupil and disturbances of vision observed by Ambrosoli, Galippe, and Rochefontaine; or the contraction of the pupil stated by Robin and Coutinho. They therefore regard the drug as our most certain and trustworthy diaphoretic, especially as it is destitute of all danger, which is more than can be said for any other sudorific, vapour-baths and Turkish baths included.

As to the physiological effects of jaborandi, their experiments show—1. Increase in the frequency of the pulse; 2. Increase of temperature as diaphoresis sets in—an increase, not only relative, but almost always absolute, the the thermometer rising from one-fifth to two-fifths of a degree Fahrenheit. 3. Augmented power of the heart's systole, with relative increase of arterial pressure. 4. Abundant secretion from the salivary glands and skin. 5. Diminution of the weight of the body, equal to from 1½ to 3½ lbs. (English), counting the saliva, the urine, and the sweat; but counting the sweat alone, the loss was only from ½lb. to 1½ lb. 6. Diminution of the temperature at the end of the experiment in proportion to the amount of perspiration, from 2° F. to 3° F.

The authors insist upon the important fact that none of their cases presented the nervous phenomena—motor and sensory—nor the cerebral symptoms and disorder of vision described by other experimenters. Neither did they meet with the redness of the skin, and especially of the ears, the bronchial secretion and other symptoms already mentioned. As to the urine, not only was this secretion not increased, but it was absolutely diminished by the drug, a fact of the greater importance, since in experiments upon dogs the drug acted as a diuretic. From all this it results that jaborandi causes increased tissue-change, manifested by increase of temperature, and increased activity of the circulation, with necessary increase of waste material. The authors believe that the first effect is upon the tissues, and that the perspiration and salivation are only the consequence of the increased products of oxidation.

The therapeutical deductions which they draw from their experiments, and which are supported by cases treated in the hospital at Pisa, are that jaborandi is of great value in rheumatic affections, both acute and chronic, in serous effusions, and in inveterate syphilitic affections, while it is injurious in effusions due to a watery condition of the blood.

We would draw special attention to this paper, as one of the most practical that has appeared on jaborandi. It will be seen that the authors have not only suggested the therapeutical uses of the drug, but have administered it successfully in various cases.

ANTAGONISM BETWEEN JABORANDI AND SULPHATE OF ATROPIA.

M. Vulfian has shown (*Gaz. des Hôp.*, 1875, No. 47)—

1. That it was sufficient to inject into the crural vein of a dog about 60 grs. of a solution of jaborandi, in order to produce a considerable increase in the salivary and biliary secretions, which were completely suspended when this injection was followed by a similar one of the sulphate of atropia.

2. That placed directly in contact with the heart or injected under the skin of a frog, the jaborandi caused a considerable slowing and even a complete arrest of the heart's action, while this organ soon resumed its regularity and normal frequency under the influence of atropine. The same experiments made upon the dog gave the same results.

3. Finally, that the extract of jaborandi produces contraction of the pupil almost as great as that obtained from the calabar bean, that here, too, the atropine easily triumphs over the effects produced by the first of these agents.

THE SIGNIFICANCE OF DOSES, PHYSIOLOGICAL AND THERAPEUTICAL.

Dr. Clark, of Boston, in a paper on "The Significance of Doses in Medicine; or, Doses, their Physiological and Therapeutical Import," submitted to the American Medical Association, observes that of doses there are the single, the continued, the frequent, and the toxicological. The first and the last are those given in treatises upon materia medica.

The continued and frequent doses were specially considered.

The continued dose is the administration of a drug in such a manner that elimination of one dose does not take place completely before the absorption of the following dose is commenced. In this manner the blood is kept constantly charged with the drug.

The single dose may charge the blood with the drug, but elimination is permitted to take place before absorption of the second dose is begun. The physiological and therapeutical difference between these doses is important. Ammonia, gallic acid, bromide of potassium, alcohol, &c., were referred to as remedies readily absorbed, and rapidly eliminated; and if the physician desires to obtain the best effect from those drugs, or a prolonged effect, he must give them in such a manner that elimination of one dose will not be completed before absorption of another will have been begun.

The man who takes an eye-opener in the morning, wine for dinner, a digester for supper, and a night-cap for the night, is constantly under the influence of alcohol.

The frequent dose is giving of medicine so as to impart to the organism some one or more of its actions in rapid succession. For instance, aconite may be given in five-drop doses of the tincture, but one-half drop doses repeated every half-hour for ten times, or drop doses repeated every hour for five hours, have a far different physiological and therapeutical effect than when the entire five drops of the drug are given at once.

The special point in the paper insisted upon by the author was, that continuation of doses was not necessarily a continuous dose; but in order to administer a continuous dose the ratio between absorption and elimination must always be kept in mind.

MORE ABOUT TRANSFUSION.

Professor Ponfick, of Rostock, has published an essay on transfusion in *Virchow's Archiv.* It results from numerous experiments made by him that the injection of large doses of blood taken from a different species of animal destroys the animal into which the blood is injected; the injection of medium quantities is also injurious. His researches also prove that the immense majority, and very probably the totality of all the blood globules injected, are rapidly destroyed.

Since the first attempts at transfusion were made, operators have sought in the conservation of the essential elements of the blood for the efficacity of this new mode of treatment. The progress which the application of the microscope to medical studies realised at the beginning of this century having speedily conducted physiologists and physicians to attribute to the red blood globules the vital properties of that fluid, the partisans of transfusion give the principal, if not the whole importance of the operation which they planned, to the transmission of these globules. If we rally to this opinion, and Dr. Ponfick sees no reason to do otherwise, we must ask whether the injection into the vessels of one animal of blood taken from an animal of another species is an efficacious operation. The reply to this question, he thinks, cannot be very satisfactory, for, according to the experiments and considerations spoken of, this blood cannot be of any use, except by reason of its plasma and white corpuscles.

As to the injection of the blood of an animal on another animal of the same species, it is almost entirely without danger. The immense majority of corpuscles injected continue to live in the organism into which they are introduced, and the utility of their transfusion in disturbances consecutive on loss of blood is undoubted.

In terminating his remarkable work, contained in the 62nd volume of *Virchow's Archives*, Ponfick declares that he in no way intends to infer from what he has noticed in some animals, especially in dogs, what would take place in man; he also does not desire to resolve the most important questions in practical medicine by considerations solely based on observations made on persons in good health. His aim in writing these lines was simply to augment our knowledge as to the influence of transfusion on the animal economy.

GALVANO-CAUSTIC TREATMENT OF NEW GROWTHS, ETC., IN THE AUDITORY MEATUS.

Dr. L. Grossmann (*Wien. Med. Presse*, Nos. 11, 12, 14, and 15, 1875) believes galvano-caustic to be much better than either the knife or caustic for the removal of fibrous polypi in the external auditory meatus. Perforation of the tympanum by this method is also, Dr. G. thinks, preferable to either myringotomy or myringectomy, since an opening can be made as large as is desired with such rapidity as to cause almost no pain.

Dr. G. even talks of galvano-cautery for the removal of foreign bodies from the external meatus !

OPERATION UNDER CHLORAL HYDRATE.

DRS. J. S. NAIRNE AND ALEXANDER NAIRNE employed chloral as an anæsthetic during the removal of a metatarsal bone from a child three years old. They describe the mode of administration in the *Glasgow M. J.* Of an aqueous solution of chloral, of which 20 minims contained 12 grains, they injected subcutaneously 10 minims at 10.30 a.m. No effect at 10.38. Ten minims more injected at 10.40. At 10.45 drowsy. At 10.55, 10 minims more injected: patient sleeps, and if awakened falls asleep again in a moment. At 11.5, 10 minims were administered by the mouth : child snores, pinching makes her cry, but she sleeps again immediately. At 11.15, 10 minims more by the mouth. At 11.20 she was in a deep sleep : pinching did not wake her, and the operation was performed. During its performance she began to cry, as if dreaming, but left off, and was fast asleep the moment it was over. She was allowed to sleep for two hours, and then made to drink a cupful of strong tea, three-quarters of an hour after which she sat up, looking dazed, but unterrified, and oblivious of pain. Drs. Nairne tell us that the solution of chloral was too concentrated, that it made deep wounds afterwards, which, however, healed up well enough ; but we may observe that a much weaker solution is apt to produce ulcers, which do not always so readily heal. Drs. Nairne add that they proposed to inject strychnia subcutaneously in cases of an overdose of chloral, as they have found it make chloroformed animals brisker. They have also found a few drops of an aqueous solution of strychnia (2 grs. to the ounce) remove the nausea and vomiting which sometimes follow the inhalation of chloral.

It will be observed that nearly an hour was consumed in administering the chloral, that even then the anæsthesia seems to have been imperfect, and that ulceration followed at the points of injection. Moreover, as it is by no means clear that the method is less dangerous than the inhalation of chloroform or ether, it is not likely to commend itself to other practitioners.

DR. KEITH ON OVARIOTOMY.

DR. KEITH has published (*B. M. J.*, June 26th) a table of his fourth series of 50 cases of ovariotomy. There were only 6 deaths in this series. In his first series there were 11 deaths ; in the second, 8 ; and in the third, 8. He also mentions a case not included in this table, in which he operated in 1863, and in which, after ten years of perfect health, the disease returned in the other ovary. This was removed, and the patient is now quite well. In 2 cases ovariotomy was not completed : one of these died four weeks afterwards of septicæmia ; the other died in three days, and every organ in the abdomen was found to be loaded with cancerous deposit. Dr. Keith, after trying all sorts of clamps, seems to have definitely adopted the late Mr. Baker Brown's method of treating the pedicle with the actual cautery. In all the cases sulphuric ether has been employed as the anæsthetic.

SPINAL CURVATURE.

DR. J. C. T. PRAVIZ has contributed to the *Lyon Médical* a series of illustrated articles on this subject, in which, after having reviewed the various modes of treatment that have been employed, he shows that orthopædy has resources superior to those with which it is credited by the generality of French physicians, and that, in fact, it is not inferior to any other branch of reparative surgery.

CATARRHAL CONJUNCTIVITIS.

WE have been accustomed to attribute catarrh of this form to wind, dust, changes of temperature, &c. ; but Prof. Arlt, who is now publishing (*Allg. Wiener Med. Zeitung*) a series of articles upon the subject, has found upon examination of the records, that of upwards of 4,000 patients annually treated at the dispensaries for this malady, those who are most exposed to these alleged causes (coachmen, conductors, street-sweepers, and the like) bear but a small proportion to the entire number. He also fortifies his position by quoting from Dr. Röse (*Krankheiten des Orientes*), who, in enumerating the causes, says that neither the dazzling sunlight nor the fine sand nor dust can be considered as having much influence, because he has found the affection to be exceedingly rare among the Bedouins of the desert, and because this malady is very uncommon in Egypt, south of Cairo.

HOT WATER AS A VAGINAL INJECTION.

DR. EMMET says (*New York Med. Journ.*) this simple remedy, when properly administered, is a most valuable one. It is generally thought that the application of heat by this method relaxes the vessels and increases the congestion ; but this is only the early effect, for, if prolonged, the capillaries are excited to increased action. The same is seen in the bleached and wrinkled appearance of parts after removing a hot poultice. The immediate effect of cold is contraction, but with reaction there comes dilatation. If the patient be placed on her back with the hips elevated by a properly-shaped pan placed below her, and a gallon or more of hot water at 98 deg. slowly injected, the mucous membrane will become blanched in appearance, and the canal as diminished in size as if a strong astringent had been administered. While the hips are elevated the vagina will retain during the injection a large quantity of water, which, by its weight, will distend every part of the canal, so that it will come in contact with the whole mucous membrane under which the capillaries lay. The vessels of the neck and body of the uterus pass along the sulcus on each side of the vagina, and their branches encircle the canal in a most complex network. The vessels of the fundus, through the veins of which the blood passes by the liver back into the general circulation, communicate with those below by anastomosis. Hence by hot-water injections inflammation can be, as it were, starved out. He knows from observation that several of these injections daily at 100 deg. to 106 deg. will abort an attack of cellulitis, if resorted to early enough, and their use kept up by the assistance of rest and opium.

SIGN OF PLEURITIC EFFUSION.

DR. WARD says (*New York Med. Journ.*) it is easy to determine fluctuation of liquid in pleuritic effusion, as well as in ovarian and in ascitic cases. When the chest is full of water, by having an assistant to use percussion in the second or third intercostal space, and by placing a finger in the seventh intercostal space when thoracentesis is practised, the feeling of fluctuation is said to be distinctly given.

IS IODIDE OF POTASSIUM A SPECIFIC IN SYPHILIS ?

IN face of the reaction towards mercury in England, it is interesting to chronicle that Dr. Joseph Beck (*Philadelphia Med. Times*) read a paper on iodide of potassium at a meeting of the Indiana State Medical Society recently, to combat a paper read by Dr. Sturges, of New York, which appeared in the *American Journal of the Medical Sciences*, on the " Use of Mercury in the Late Stages of Syphilis."

Dr. Beck says he does not now use, nor has he for a long time past made use of mercury in syphilis. He says he is entirely satisfied that in the treatment of any phase of the disease mercurials do harm; he uses mercury in some diseases, but not in syphilis. Mercury acts quickly, he admits, in causing the symptoms to disappear, but this only masks the disease, and tertiary symptoms will surely appear. "Every case of secondary syphilis," he says, "which has been successfully treated by mercury will, as surely as the sun rises, reappear as tertiary syphilis, if the patient lives long enough." A radical cure of syphilis requires more than a year of treatment; and he feels very well satisfied if able to dismiss a tertiary patient from treatment without a mark in eighteen months. He thinks that iodide of potassium cures syphilis, and that mercury merely masks its symptoms. He asks his readers whether they have ever seen or heard of a case which in its secondary form had been treated to a cure by iodide of potassium alone which entered into the tertiary stage.

His treatment of syphilis is as follows: He gives a tablespoonful of a mixture containing 7 drachms of the iodide of potassium with 4 drachms of the ammonio-citrate of iron, in 8 ounces of fluid containing orange-peel and peppermint. This is a high dose of iodide of potassium. He also gives a few drops of Fowler's solution of arsenic after each meal, and some cod-liver oil. He brushes ulcerations over with a lotion of hydrate of chloral in water, one part to two. He raises the quantity of the iodide of potassium until symptoms of iodism are produced, and carries the dose of the arsenic up to five minims. He has no belief in the iodide of sodium. He believes that in the iodide of potassium, used in the manner indicated above, we have a specific antidote to syphilis, either secondary or tertiary, and is sure that his readers will be surprised at the rapid effect produced by this drug in very large doses. They must not forget, he says, that small and moderate doses are literally thrown away, and that large amounts alone produce permanent good effects.

RADICAL TREATMENT OF PROSTATIC HYPERTROPHY.

Prof. Heine states in *Langenbeck's Archiv.* that he has cured six cases of prostatic hypertrophy with iodine injections, and now recommends the parenchymatous injection of moderately concentrated solutions of iodide of potassium. The operation can be borne by old and weak individuals, because the diminution of the hypertrophied organ takes place without suppuration. When its volume is diminished, the secondary affections of the bladder are also relieved, provided they have not attained a high degree. The median line of the prostate should not be chosen for the operation, as a small artery which passes there may be wounded. The solution employed by Prof. Heine was—Potass. iodidi, ʒij.; tr. iodinii, ℥ij.; aq. destil., ʒij.

ERGOT IN THE TREATMENT OF INCREASED MAMMARY SECRETION AND INFLAMMATION OF THE BREAST.

Dr. J. Sehtscherbinenkoff (*Centralblatt fur Chirurg.*) has had his attention drawn to the influence of ergot on the mammary gland.

During an epidemic of ergot poisoning, he observed that in nursing women there was frequently an entire cessation of milk when symptoms of ergotism appeared.

The same phenomenon was observed among cows fed with meal containing ergot.

Regarding the accumulation of milk in the glandular parts of the breast as the chief cause of mastitis, he administered ergot in many cases in which this process was in an early stage, with the happiest results. Further, during actual inflammation of the gland, the use of ergot was attended by a speedy recovery. At time of weaning, the ergot caused a speedy cessation of the lacteal secretion.

DUGAS PATHOGNOMONIC SIGN OF DISLOCATION OF THE SHOULDER-JOINT.

Dr. W. T. Briggs (*Nashville Medical Journal*, May, 1875) describes this sign as follows:—

If the fingers of the injured limb can be placed by the patient, or by the surgeon, upon the sound shoulder, while the elbow touches the thorax, *there can be no dislocation;* and if this cannot be done, there must be a dislocation. In other words, it is *physically* impossible to bring the elbow in contact with the sternum, or front of the thorax, if there be a dislocation; and the inability to do this is *proof positive* of the existence of dislocation, inasmuch as no other injury of the shoulder-joint can induce this inability.

JOTTINGS FROM JOURNALS.

Sciatica.—In cases wherein hypodermic injections of morphia have not been found to answer Dr. Peter, of the Hotel-Dieu, Paris, has resorted with much advantage to compresses saturated with chloroform. The compress is to be pressed closely against the affected part. Two or three applications were found to afford extreme relief. Of course, in cases of double sciatica, when intra-pelvic disease may be predicated, this means will not yield favourable results.—*L'Abeille Médicale.*

Anal Fissure.—M. Dubreuil, of l'Hospice de Lourcine, does not have recourse to forced dilatation by means of the fingers introduced into the anus, but to Cusco's valved speculum. When this is introduced and then expanded, the fissure is torn across, and heals readily, like any other simple wound.

Treatment of Pulmonary Cavities.—An American editor actually proposes to open tubercular cavities by means of the canula and trocar, then introduce various supposed remedies by injection. This practice, spoken of by Baglivi, followed up by the experiments of Koch on the lower animals, and actually introduced by Pepper, can only be characterised as unjustifiable. In such cases, what can be expected? Other cavities probably coexist in the lungs. The lung itself is always more or less loaded with tubercles. Otherwise, if we accept Dr. MacCormac's views, the lung only shares the general depravation of the tissues as induced by the habitual respiration of an atmosphere already deteriorated by previous respiration, and rendered in fact, thereby, not wholesomely respirable.—*American Medical and Surgical Journal.*

Depression of the Fœtal Skull in Labour.—M. Dutrait, interne des hopitaux, relates two instances of this very unusual occurrence as having happened to the same woman in La Maternité de la Croix Rousse. The first time the infant had not reached its term; but the full period was attained on the second occasion. Delivery was accomplished with much difficulty by M. Fochier with the forceps. The cord was pervious. The depression, in both instances, was considerable; in one of the cases it subsisted in the frontal bone, in the other both the frontal and parietal bones were implicated. The infants were born dead. —*Lyon Médical.*

Ascending Spinal Paralysis, with Recovery.—M. Soulier, of Lyons, was the physician in charge. The patient was a weaver aged 57. The upper extremities were partially incapacitated, and there was more or less dysphagia. The patient however retained little power over the lower extremities, and passed his urine with difficulty. There was no cerebral complication; the man could talk fluently; nor was there any impairment of sensation. The treatment consisted in the daily exhibition of the iodide of potassium, belladonna in extract and in powder, with what the writer calls ten points of fire (dix pointes de feu), possibly moxas, or probably heated iron, to the cervical region. The treatment lasted from the 12th of September to the 13th of November, when the patient left hospital very greatly improved, and able to walk for an hour. Dr. Soulier considers the foregoing case one of acute ascending myelitis of the grey substance of the medulla.—*Lyon Médical.*

OVARIAN COMPRESSION IN HYSTERIA.—Prof. Charcot sets out with stating that in the great majority of instances of hysteria there is an aura which starts from one ovary, sometimes both. And he further insists that it is only needful to maintain a decided pressure over the affected ovary in order to suspend the attack. This result, it seems, M. Charcot realised fully in a case of hysteric epilepsy. Whenever he compressed the left ovary, the hysteric symptoms disappeared. When the pressure was relaxed, the symptoms returned. The compression is the same as that which is made use of when the iliac artery is compressed. The practice, if only its success shall be confirmed, seems calculated to be of use.—*Lyon Médical.*

COMPRESSION OF THE TESTICLES.—A curious case is related in the *Gazette Hebdomadaire*, by Dr. Foet, in which a well-marked male hysteria, very severe in fact, was effectually relieved by compressing the testicles, in less than a minute. Antispasmodics were then prescribed, and the man returned next day to his work.

DIABETES.—A complete cure of this affection is related in the *Bahia Medical Gazette*, by means of phenic acid, two and a half grains night and morning, in a vehicle of mint water. The patient, a teacher of music, had been struck from his saddle by a falling tree. Trommer's test had shown a very large amount of glucose or grape sugar in the urine.

OZONE.—The profession is not in general exactly informed as to the potential atmospheric status and chemical action of this remarkable substance, allotropic oxygen. In other words it appears then, according to Dr. Balwin, that ozone neither induces disease by its presence nor by its absence, and that its important function resides simply in the purification of the general atmosphere, by destroying, not the living germs of disease, but only the products of decomposition.—*American Journal of Medical Science.*

PUERPERAL VOMITING.—Medical men are only too well aware how troublesome this sometimes proves. The efficacy of tobacco-smoke is enlarged upon in the *Gazetta Medica Italiana.* In an obstinate instance, after recent parturition, in a lady, Dr. Beaumetz advised the patient to smoke a cigarette after meals, whereupon the vomiting actually ceased as if by enchantment. Gros indeed describes the case of a woman who was relieved of otherwise obstinate vomiting during two successive pregnancies by the same simple but here effective means.

SALICYLIC ACID.—From a communication addressed by Professor Schwarz, of Gratz, to the editor of the *Boston* (U.S.) *Medical Journal,* it appears that Dr. Heyden has established, at the suggestion of Professor Kolbe himself, in Dresden, a manufacture of this important substance. It preserves, it seems, meat, fish, milk, beer, wine, has no poisonous or unpleasant qualities, and is otherwise the best disinfectant known. The Dresden price of the article is 10 thalers the kilogramme.

DIGITALIS.—A rather remarkable instance, corroborative of the apparent efficacy of digitalis in dropsy, as owing to mitral insufficiency and dilatation, is described in the *Philadelphia Medical Times.* The practitioner who relates the circumstance is Dr. Minich, and the practice itself was undertaken at the suggestion of Dr. H. C. Wood. The patient was sixty-three years old, and had been some time previously relieved by the free exhibition of elaterium. When Dr. Minich undertook the treatment the man could not move even his legs, the pulse was 130 and very feeble, respiration was at once rapid and laborious, the face cyanosed. The patient, indeed, could not lie down, and he often gasped for breath. In fact, to use the quaint language of his biographer, he was drowning, and unless relieved, must die speedily. Half a grain of digitalis and a grain of squill were now administered every two hours. In thirty-six hours the pulse went down to 70, there was immense diuresis and well-marked general relief. The medicine was then given six times daily, then progressively less frequently. In eight days the anasarca had disappeared. The patient slept and ate well, and with tonics and a liberal regimen had regained a comparative measure of health and strength.

TOPICS OF THE TIME.

MR. HENRY LEE'S HUNTERIAN LECTURES.

THE Hunterian Lectures lately delivered by Mr. Henry Lee at the Royal College of Surgeons of England express the ripe experience of one of our greatest English syphilographers. Hunter's treatise on syphilis naturally furnished the starting point, and his principles were ably illustrated by the lecturer—1. With regard to the local sore, which, Mr. Lee believes, never affects the constitution; 2. Where the constitution alone is affected; 3. Where a local disease precedes the constitutional manifestations. Mr. Lee showed that the blood of a syphilitic patient may communicate the disease—a fact proved by Hunter's cases, in which the transplantation of teeth had been followed by syphilis, and confirmed by various observers since his time, reference being made to vaccino-syphilis, and to those painful cases in which both medical men and midwives have become affected in attending women during their confinement. The expression blood inoculation does not imply that the poison contains any of the red corpuscles of the blood. Probably it is the white corpuscles, or some derivative from them, which contains the life-giving power both in healthy and diseased actions, so that a fluid derived from the blood, but untinged with red particles, may produce disease.

Mr. Lee next considered the morbid processes by which the blood is influenced. He described a peculiar urethral discharge which may persist either in primary or secondary cases, and be a sign of the infecting nature of the poison which produced it, which, moreover, may not be inoculable upon a person under the influence of the syphilitic fever, but which, he says, may be upon another person. As Ricord inoculated without result with the product of gonorrhœa, so Mr. Lee has done the same with the secretion of an unirritated Hunterian chancre. He also cited Mr. Morgan's cases in illustration of the Hunterian doctrine that the discharge from a mucous membrane may be inoculated so as to produce a syphilitic sore. After a full consideration of the whole of this subject, Mr. Lee concluded that the product of primary syphilis is inoculable artificially, so as to produce the same effects as when it was naturally acquired; that the results of secondary manifestations are inoculable, so as to produce the same results; that the secretions from mucous membranes in syphilitic patients are very often the means of communicating the disease, and may sometimes be artificially inoculated.

As to treatment, Mr. Lee said that the morbid processes described by Hunter without reference to time furnish the most reliable indications for practice. At whatever period of the disease we find the specific adhesive form of action, whether as a primary indurated sore, or an affection of the inguinal glands, or as papular, tubercular, or scaly eruptions, he held mercury to be indicated. On the other hand, when the disease, whether primary, secondary, or tertiary, has a tendency to produce suppuration, the use of this drug requires great caution, and the same may be said where the affected parts run rapidly into ulceration, although in some of these one form of mercurial treatment is wonderfully efficacious. He pronounced mercury to be injurious where mortification takes place, whether affecting minute or larger portions of the tissues.

From a very full consideration of absorption and inoculation, the lecturer concluded that artificial inoculation on a syphilitic subject with matter from an unirritated primary or secondary affection generally produces no result, although in exceptional cases some abortive form of the adhesive inflammation may take place. If, however, the secretion be taken from a primary affection which has been artificially irritated, or a secondary affection which is naturally inflamed, then the inoculation often succeeds, and fresh matter is formed, which tends rapidly to pass into suppuration. The thickening is not accurately defined as in the primary disease. It gradually disappears in the surrounding parts, and a pustule forms in its centre and discharges. This is the common result in the experiments that have been made in the process of so-called syphilisation. When these inoculations heal, the new matter formed is equal in amount to that which is removed. There is no loss of substance, and often no cicatrix.

The process by which the newly-formed matter is deposited, and that by which it is removed, ultimately balance each other. The results thus produced have long appeared to Mr. Lee different from those which occur where matter is inoculated from what he called the local suppurating sore. Here suppuration occurs at once. Ulceration, to a greater or less extent, necessarily occurs. There is a real loss of substance, and consequently a depressed cicatrix when the part had healed. We have then three different results of the inoculation of syphilitic matter—1. That which occurs in a constitution not previously syphilitic, and which consists essentially in a persistent adhesive action; 2. That which generally occurs in a syphilitic constitution when the inoculated matter has been the result of some accidental cause of irritation; 3. That which is produced by the inoculation of pus from a local suppurating sore.

It is necessary briefly to allude to the frequency with which these two last actions may exist in different degrees, and produce a mixed result both in artificial and natural inoculation. Mr. Lee stated that *twofold inoculation* may occur either in the same or in different parts, at the same or at different times. When it occurs in the same part and at the same time, in a person previously unaffected, the results of the inoculation of the secretion from the suppurating sore will first develope themselves, and, subsequently, the results of the inoculation of the secretion from the infecting sore. This depends upon the different period of incubation which naturally belongs respectively to each kind of disease.

It is probable that the two actions resulting from the two kinds of inoculation cannot go on exactly in the same part at the same time, but they may be in such close proximity, or may follow each other so closely in point of time, that their respective effects (as regards the character of the secretion, &c.) cannot be clearly distinguished. The secretions from two different kinds of inoculation may then become mixed together, and if inoculated in that condition, a twofold result may follow. In that case the suppurating sore will first run its course, having all the appearances of a soft, non-infecting chancre, and afterwards (perhaps as this sore was healing up) the adhesive and infecting form of inflammation will appear. The cases in practice which have led to the greatest confusion are those in which the inoculation of the secretion from a suppurating sore has followed, after the lapse of three or four weeks, the inoculation from an infecting sore. We have, then, the results of two kinds of inflammation and their respective products in close proximity. The suppurative inflammation does not, then, *prevent* the infection of the patient's constitution; the adhesive inflammation does not *prevent* the appearances of the "specific pustule." The means of diagnosis which would refer these mixed sores either to the infecting or to the suppurating class exclusively are therefore absent.

In a subsequent lecture Mr. Lee discussed the subject of urethral discharges, in reference to which he made some most important observations. He showed how thoroughly Hunter distinguished between seminal and some other discharges, and went at length into the proofs adduced by that great anatomist and surgeon. He showed also how injurious has been the local treatment so often resorted to since the publication of Lallemand's works, and pointed out that in the comparatively rare instances in which local treatment may be desirable caustic is entirely unnecessary, an astringent, such as perchloride of iron, being quite sufficient. The lecturer endorsed the statement of Hunter, that from his dissections we have a presumptive proof that the semen can be absorbed from the body of the testicle, and from the epididymis, and that the vesiculæ secrete a mucus which they also are capable of absorbing when it cannot be made use of.

This observation of Hunter's is one of great importance, because a false physiological principle in an opposite sense has led to much vicious practice. It has been assumed and taught in public theatres, by men old in years, but perhaps not in wisdom, that the elimination of the semen was as necessary to health as the discharge of the bile or the urine. This is not so. In man and in animals, in a state of nature uninfluenced by exciting causes, the testis has the power to deal with its own secretion, and so have the so-called vesiculæ seminales.

In proof of this Mr. Lee mentioned that a gentleman who passed many weeks among a savage tribe, told him that during the time he was there, having seen nobody for whom he felt the least inclination, he had no seminal discharge of any kind, and remained in perfect health. He added that in animals, when subject to excitement, there is often some white fluid observed at the extremity of the urethra. This probably comes from the various glands about the urethra itself; but Mr. Lee thought that a seminal discharge in them, except when excited by intercourse, was exceedingly rare. Hunter's idea, that the testis has the power of dealing with its own secretion, was, he believed, quite correct; and of this he lately had a remarkable proof. A gentleman had had inflammation of both testes, supposed to be of a scrofulous nature. On each epididymis there was left a circular indurated knot, which had probably rendered the duct quite impervious. At all events, this gentleman had had no emission for a period of three years. He was, however, in perfect health, and all his functions, including his sexual relations, with this exception, were perfectly natural.

In men with well-regulated minds, and under correct moral influences, Mr. Lee is satisfied that often no urethral discharge of any kind occurs. Provision is made by which the secretion is in some way altered and removed, as it doubtless is in the ductless glands.

The importance of these views, which we fully endorse, cannot be exaggerated when we reflect on the extensive circulation of false and vicious doctrines respecting seminal discharges. We hope Mr. Lee's Hunterian Lectures will be published in a form to make them accessible to every practitioner.

PNEUMONIA.

The subject of pneumonia is always full of interest, and its treatment, in spite of all that has been written, remains as uncertain as ever. This disease, indeed, has been the chief battle-ground of rival schools of medicine. Men are never tired of reporting cures, and yet one would suppose they must know that the most opposite kinds of treatment have apparently given the same results. There are various reasons for distrusting statistics as a guide to the effect of treatment upon pneumonia, and considering its varying forms, stages, and complications, we might well hesitate to adopt any general treatment, especially when we consider the varying conditions of the patients attacked, the different extent to which the organs are affected, and the variety of the pathological phenomena.

PNEUMONIA IN PRIVATE PRACTICE.

As almost all our statistics have been obtained from hospitals, we have been much interested in some notes on 64 cases in private practice, published by Dr. Thomas Barr in the July number of the *Glasgow Medical Journal.*

During the sixteen months in which these 64 cases occurred they formed five per cent. of all his patients, so that it is not an uncommon disease. Forty-eight were males and only sixteen females, a fact easily accounted for by the greater exposure of the male sex. In lobar pneumonia in children, Dr. Barr has been struck by the length of time intervening between the first symptoms of illness and the presence of physical signs. In an infant with high fever, inability to suck, persistent vomiting, moaning, dilating nostrils, and occasional cough, day after day he has discovered no definite sign, unless a comparative feebleness of the vesicular murmur at some part, until on the fifth or sixth day he has found whiffing tubular metallic breathing—rarely at this stage crepitus—and slight, never well-marked, dulness on percussion. To a young practitioner these cases must often prove puzzling.

Thirty-four cases were right basic; twenty-five left basic; three were seated at the left and two at the right apex. All the cases in which the left apex was affected perfectly recovered, but both those in which the right apex was the seat of the disease ended fatally, and were evidently tuberculous. Of the whole number eleven died, but of those between the ages of six and fifty, one in twenty-one died.

As to treatment, Dr. Barr never used blood-letting, and only once applied leeches. He seldom gave antimony, except as an expectorant and diaphoretic—not in antiphlogistic doses. He never gave mercury except as an aperient, and he thinks he has seen more good done by opium than any other single remedy. It relieved pain and allayed cough. At early stages poultices of linseed-meal and mustard gave comfort, and were frequently repeated, but blisters were reserved for cases in which condensation lingered longer than usual.

AMERICAN VIEWS ON PNEUMONIA.

Among recent literature on the subject we have been struck with a very practical paper by Dr. Gibbons, sen., in the *Pacific Medical and Surgical Journal.* Dr. Gibbons discriminates between the various forms of pneumonia, and points out those cases in which bleeding has been most effectual, and in which he would still adopt the practice. These cases, however, only occasionally occur, and Dr. Gibbons is a full believer in the change of type of disease. He thinks that blisters have fallen into undeserved neglect in this and other internal inflammations, and he questions the propriety of giving quinine in considerable quantity from day to day, having seen serious mischief result from its use in this way in children. Dr. Gibbons adds: "I will conclude by repeating the general idea that the attempt to establish a form of treatment for pneumonitis is sheer quackery; that few diseases require a wider range of medical measures; that each case stands by itself as an object of discriminating judgment; that the several stages demand different and even opposite treatment, and that the *patient* is to be treated rather than the malady."

There was a discussion on Pneumonia in January last at the New York Academy of Medicine.

Dr. Austin Flint noted first the different character of the disease in different localities, and at different times. In the Southern States pneumonia has always been a graver disease than in the Northern. Again, the disease, as it manifests itself at present in New York, is of a more dangerous character than it usually gets credit for. He gave the history of some cases coming before him in January, which proved fatal in a few days. As regarded treatment, he went into the results of Louis on this point very fully. Louis reported 78 cases, in which there were 28 deaths; he reported also other 29 cases, with 4 deaths. In these observations he did not regard the subject of mortality, but simply whether bleeding did or did not tend to shorten the disease. The conclusions arrived at were, that if bleeding were practised in the earlier days of the disease, it not only had a happy effect, but shortened the duration of the disease four or five days; whereas, if the bleeding were delayed till late in the disease, no good effect was obtained. Jackson reported 50 cases, in which he had 8 deaths. His treatment was the same as that of Louis. Dr. Flint reported 133 cases that came under his own observation, and in which bleeding was practised in only 12. There were 35 deaths, but a point of interest connected with them was that they were observed in different cities—64 at Buffalo, with 11 deaths; 11 at Louisville, with 7 deaths; 58 at New Orleans, with 17 deaths. He said that there was one very important thing to remember in the consideration of pneumonia, and that was, that when the inflammation was confined to but one lobe, and there were no complications, the tendency was to recover; and, as regarded treatment, whether bleeding exerted an influence in preventing the complications which might arise, such as gangrene of the lungs, extension of the inflammation, pericarditis and clot in the heart. He referred also to the value of opium in diminishing the constitutional disturbance; and to the plan, presented latterly, of keeping the heat of the patient down by antipyretic treatment. He was in favour of giving quinine. Dr. Flint read a short description from a medical periodical of pneumonia developing in a school which had been exposed to the influence of sewer gases.

Dr. W. H. Thomson read the histories of five cases of pneumonia recently under observation in Bellevue Hospital, in which the main treatment had been antipyretic. The method pursued was to apply to the chest ice-bags till the temperature fell. Of the five cases, only one proved fatal. Niemeyer was quoted as to the effect of cold in keeping down the temperature, and improving the patient's chances. The medicinal treatment consisted in the administration of ten grains of the carbonate of ammonia every two hours, with one grain of quinine every hour.

Dr. W. H. Loomis said that in the consideration of pneumonia the two main elements were etiology and treatment; and of the causes the most important was age. He saw it chiefly between twenty and forty, and again after sixty. The pneumonia of children was broncho-pneumonia. The predisposing cause was the cause of the disease, and by the predisposing cause he meant anything that lowered the vitality of the patient. Here, in New York, he said, we are all staggering under the influence of malaria (is this true of New York ?), and with any slight exposure there may follow a pneumonia. Inanition, the continued use of alcoholic drinks, the poison of sewer-gas, rheumatism, pyæmia, and all debilitating states render the system at any time liable to an attack from a cause which, in sound health, would prove inoperative. Dr. Loomis said also that, in his experience, idiopathic pneumonia was of such rare occurrence that he questioned its existence. He did not think there could be much difference of opinion as to the injury received from venesection in pneumonia, where the predisposing cause was debility; the indication was to find and combat the cause of the debility. As to the use of ice in the treatment of the disease, his opinion was decidedly against it, though he was sorry he had not had a more extensive experience. He found that it kept down the temperature as long as it was applied to the chest, but he found also that at the same time there was a tendency for the disease to spread. He found, on coming on duty at the Mount Sinai Hospital, several cases treated by ice, but they all died. The cause of the high temperature was the metamorphosis of tissue that takes place, and the remedy, in his experience, that prevented this change, was the sulphate of quinine. He had found a full dose of the drug to lower the temperature from one to one and a half degree, and considered that ten grains should be given as a dose. When the heart began to flag and grow weak, the remedy was alcohol. He found it the only thing to be relied on to stimulate the heart to renewed activity, and to ward off œdema of the lungs and other causes of failure of the circulation.

Dr. J. C. Peters gave briefly his experience in the treatment of pneumonia at different places. In Berlin, in 1841, blood-letting was practised even in typhoid pneumonia. Digitalis was the remedy relied on for internal treatment. The success of this treatment was very good. In Vienna the treatment carried out by Skoda was nearly entirely expectant, and his results were also very good. The remedies used were nitre and a decoction which in reality was hay tea. There was in Vienna at that time a homœopathic hospital, conducted far in advance of the hospitals of that time, and resembling to a certain extent Roosevelt Hospital in New York. The treatment consisted in the administration of a preparation of phosphorus in water. This treatment was very successful, but not so much so as that of Skoda At the New York Hospital the treatment was the administration of large doses of tartar emetic. At first vomiting and diarrhœa resulted, but on the third day a tolerance of the remedy was obtained. The result of this treatment was also very good; but pneumonia was graver now-a-days, and, therefore, with the same treatment, more fatal.

ON SOME CONDITIONS UNDER WHICH PNEUMONIA PROVES FATAL.

Dr. Delafield lately read an important paper on the above subject at the New York Medical Society. He based his remarks on 123 cases which he had either observed during life or examined after death. He was aided also by the Bureau of Vital Statistics of the Board of Health in regard to the number of deaths occurring from pneumonia during the last two years. He had excluded all doubtful cases, such as all children under five years, and all cases where the disease had lasted more than one month. From March 1, 1873, till March 1, 1875, 2,410 cases of death from pneumonia were reported, and of these 1,134 took place between March 1, 1873, and March 1, 1874, and 1,276 between March 1, 1874, and March 1, 1875. The months in which most deaths took place were December, January, February, March, April, and May. The smallest number of deaths were recorded during August. It will be seen that the cold months were those in which deaths occurred most commonly. It was found, also, that, although there was a correspondence between the average temperature and the number of cases, there was not a coincidence with the daily temperature. No relation whatever could be drawn between the mortality and barometric changes. In regard to the age at which the most deaths took place, the maximum ranged between forty and fifty years, and the minimum from seventy years and upward.

A very interesting fact noted was, that the largest number died on the seventh day; the next largest number died on the fourteenth day; the next largest on the twenty-first day; and the next largest on the twenty-eighth day. It would seem from this that the end of every week is critical, and particularly the end of the first week. Dr. Delafield also exhibited several charts which illustrated the subject by tracings of the cases personally observed. It was found that in thirty-one there was red hepatization; in twenty-six gray hepatization; in fifty-nine there was a mottling; in two there was gangrene of the lung; in two there was breaking down of the lung-tissue; and in one there was a cheesy degeneration.

It was found that hepatization of the lung took place in twenty-four hours after the chill; and it was found also that in two days grey hepatization may occur; and in four days this grey hepatization may become complete. In fifteen of the cases there were no complications, but in the remainder œdema of the lungs, emphysema, gangrene, chronic phthisis, pleurisy, basilar meningitis, pericarditis, valvular disease of the heart, and chronic Bright's disease, were observed.

In thirty of the cases there was delirium, and with the delirium there was much of the lung involved. In five cases death took place from convulsions, and in four of those there was disease of the kidneys. In twelve cases there was sudden death, and of these there were five from dyspnœa, and in three of these five the dyspnœa was sudden and paroxysmal. The remaining seven were due to various causes, and two only were uncomplicated. In four there was Bright's disease.

In none of the cases was there heart-clot. Dr. Delafield said that in all his experience he had not seen a case of ante-mortem heart-clot in pneumonia. The assumption of heart-clot comes from the sudden death. There was, in cases of death from pneumonia, as in many other diseases, fibrine found in the ventricle, but in every case this was the result of death and not the cause of it.

THE SPIROSCOPE OF DR. WOILLEZ.

THE ingenious invention of Dr. Woillez for inspecting the action of the lungs and assisting in forming a theory of auscultation is described in the *Tribune Médicale* of June 30. The instrument is called *spiroscope*, because it permits us to see the lung respire automatically. It is composed of a glass cylinder of diameter large enough to contain one or both lungs when distended. This vase is closed above by a lid, which prevents air reaching the inside of the cylinder, except through a copper tube, on the lower extremity of which is fastened the trachea, or principal bronchus of the lung. The air contained in the cylinder can be withdrawn by means of a cylindrical bellows fixed at the base of the glass cylinder.

It is easily understood that when the lung is shut up hermetically in the glass cylinder, and the bellows removes the air, the lung commences at once to dilate from the weight of the air entering through the copper tube. As soon as the bellows is made to move, the lung is seen at once to dilate; but it is first of all certain isolated lobules which distend the surface here and there, and form small projections with irregular outline and irregularly rounded. In order to fill the lung entirely it was found that from one to one and a half litres of air were required. A remarkable result of the penetration of the air, which showed how complete it was, was that the lung which at first was of violet colour from the venous blood it contained became generally of a rosy red, which showed the chemical action of the oxygen of the air on the blood in the alveoli.

The lung thus distended was allowed to continue in this state for a time. It resulted from this that the lung remains distended by one or one and a half litres of air from the atmospheric pressure acting along the air tubes, just as it does during life after expiration, from the tendency to a vacuum which exists around the organ. After this, if the bellows be again opened and air withdrawn from the cylinder, the lung is seen to become distended generally and equally all over its surface, as it does in life, and also to collapse regularly and generally when the bellows is worked so as to allow air to enter the cylinder. The apex of the lung is seen to dilate manifestly more than the other parts.

Dr. Woillez then distended the lung to its utmost by means of causing as much as five litres of air to enter it, which is double the vital quantity it receives in a living male. He could not cause its rupture in this way, unless the lung had been macerated for a certain time in water. The lung, thus distended to its extreme point, was then dried, and its microscopic examination showed how perfect the dilatation had been.

The third experiment was for the purpose of reproducing the respiratory murmur heard in auscultation. A most unexpected fact was here observed. The lung, at first generally distended, was submitted to movements of inspiration and expiration. What was the astonishment of the experimenters to find that absolutely no sound was heard on auscultation either during the inspiration or expiration. The silence was complete, whether during the rapid and considerable penetration of air, or during a slower but more extensive penetration of air into the lung. Thus the penetration of air traversing the whole lung and distending more and more was completely without sound.

The fourth experiment consisted in carrying out the idea that a certain quantity of blood was required to be present in the lung in order to the production of the respiratory sounds. A certain density of bodies is indeed indispensable, in order that even irregular vibration should be produced in them and be transmitted by them. The quantity of blood circulating in the lung has been estimated at about one litre for each lung, which must greatly modify the physical condition of the pulmonary tissue. Dr. Woillez therefore placed a lung in the glass cylinder as usual, but fixed the pulmonary artery on a tube passing through the lid. This tube had added to it externally an india-rubber tube which dipped into a gelatinous liquid. He intended that when the air was withdrawn from the cylinder the liquid should penetrate into the divisions of the pulmonary artery, and then that air should be drawn into the lung and auscultation practised. Unfortunately the liquid traversed the pulmonary tissue drop by drop, probably from the absence of blood globules in it, so that only some 200 grammes of liquid could be introduced into the lung.

Nevertheless this experiment had the double result of proving that the penetration of the liquid alone into the divisions of the pulmonary artery takes place without any sound, as he could hear by listening, whilst the penetration of the air which then took place into the lung, the tissue of which was impregnated by a liquid analogous to that of blood, permitted the respiratory murmur to be heard during inspiration. This sound was quite apparent, although feeble, and resembled the respiratory murmur. It was scarcely perceptible in expiration, as is the case in life.

A fifth experiment demonstrated in the completest manner the necessity of a certain density of the pulmonary tissue in order to the production of the respiratory murmur. In a healthy lung he injected 400 grammes of a solution of gelatine into the pulmonary artery, and allowed the liquid injected to coagulate and cool until next day, keeping the organ in a bath of water in which chloride was dissolved.

The lung was then placed in the spiroscope, and distended as usual to a certain degree, and after this the movements of inspiration and expiration were imitated. During the inspirations which resulted from the penetration of a half-litre of air at most at each inspiration, the vesicular inspiratory murmur was very well heard, with its customary characters, whilst during the expiratory movements the murmur was far more feeble.

This lung was afterwards cut into, when it was found perfectly healthy, with all the divisions of the pulmonary artery filled with gelatinous ramifications, absolutely resembling currant jelly, the solution having coagulated after having taken up a certain quantity of the colouring matter of the blood contained in the arterial divisions.

In another experiment, a lung which was much congested after death was placed in the spiroscope, and also allowed the respiratory murmur to be very clearly heard. With respect to disease, Dr. Woillez was not able to go very far in his study of the murmurs heard by auscultation; but he points out that the lung may be filled with various coagable liquids with great ease. The elasticity of the lung and resistance of the tissue of the organ may be studied up to their limit by an insufflation, which is carried as far as can be desired.

It is seen that the expansion of the lung was effectuated by the smallest traction of the aspirating bellows, and thus permitted of the explanation of how it is that a half-litre of air suffices in ordinary respiration for each inspiration for both lungs, as was found in the experiments of Dalton, Valentin, and others. The apparatus also shows the necessity for permanent extension of the lung by the residual air, which is represented by that which cannot be expelled by the most energetic expirations during life. The spiroscope, indeed, shows that the penetration of air is not generalised in the lungs until each of them contains at least half a litre of the residual air of the physiologists, which causes that open state necessary for easy penetration of a gas.

As to the total quantity of air which the lungs may receive, it has been estimated in a general way by direct calculation to amount to four or five litres. Dr. Woillez has found that the capacity of the lungs is double, and more than that of what it has been supposed to be, each lung containing when fully expanded about five litres of air.

Finally, as to the best treatment of drowned and asphyxiated persons, Dr. Woillez observes that the facility with which the external air penetrates the lungs when the organs are dilated in the same way as in the spiroscope, seems to point to the fact that the best method of re-establishing respiration in asphyxiated persons would be to practise on the external thoracic and abdominal walls and on the diaphragm, and the solution of this question is well known to be not difficult.

ABOUT BOOKS.

Dell' Ostetrica in Italia dalla metà dello scorso secolo fino al presente. Commentario del Cav. Prof. ALFONSO CORRADI. Parte Seconda, Sezione Prima e Seconda. Bologna. 1875.

THIS magnificent work is published by the Medico-Chirurgical Society of Bologna, the reputation of which city as a centre of medical knowledge is sustained by this society as much as by its ancient university, for some of the most valuable Italian medical works are issued either in its Transactions, or, as in the case before us, as separate works, at its expense. Of course, in England publishing—especially medical publishing—is conducted on a very different plan from that adopted by any other country. We often think that the English method is the least satisfactory. As a rule, all the profit goes to the publisher, while the author runs all the risk. It would shock Mrs. Grundy, we suppose, for a medical author to publish for himself, and the plan would certainly be open to some objections, although it is adopted in some parts of the Continent. It is, however, quite certain that our medical societies might benefit the profession by undertaking works of great value in the manner so successfully adopted by the Society of Bologna.

The volume before us contains nearly 600 large quarto pages, and consists of the second division of Prof. Corradi's elaborate account of obstetrics in Italy—a work which exhibits in the most favourable aspect the learning, the industry, and the ability of its celebrated author. The numerous notes with which the pages are loaded show how well the author is acquainted with the English, French, German, and other branches of the literature of his subject, as well as with that embodied in his own language, while the text shows him to be an able critic of the authorities of these several nations.

The first section of the volume before us is devoted to the subject of natural labour, and the duties of the attendant in such cases. Here we may remark that in Italy the use of chloroform is looked upon, as the author says, as a therapeutic agent, and is therefore not generally employed in natural parturition. In connection with this we may mention the use of opium to control pains of labour, which is carefully traced from the time of Avicenna through various authors down to the present day.

The second section, comprising chaps. xviii. to xxxii., and occupying the remainder of the volume, is devoted to abnormal parturition. First we have discussed the various deformities of the pelvis, and their consequences; after which come tumours of the ovaries, uterus, vagina, rectum, bladder, &c. A chapter is devoted to stenosis and atresia, in connection with which the operation of hysterotomy is discussed. Uterine inertia and the use of ergot are naturally considered together, and, of course, an Italian author could not pass over the question of the use of quinine as an oxytoccic first proposed by Monteverdi. Hæmorrhage, avoidable and unavoidable, is treated at great length, after which rupture of the uterus, rupture of the perinæum, and other accidents of parturition are considered. Eclampsia and other diseases of parturient and of pregnant women follow, after which Cæsarian section and other operations occupy considerable space. We then have what may be termed an elaborate essay on the "Abnormalities affecting the Fœtus," and the work is brought to a conclusion by two full chapters on those involving the cord and placenta.

We have said enough to show the wide range of the work before us, and we need only add that in every part of it Prof. Corradi is as exhaustive as he is accurate. The publication of the work reflects the highest credit on Italian medicine.

Recherches Cliniques et Expérimentales sur l'Etat de la Pupille pendant l'Anesthesie Chirurgicale produite par le Chloroforme. Par P. Budin, Interne des Hôpitaux, et le Dr. P. Coyne, Ancien Interne des Hôpitaux. Paris. 1875.

Recherches sur l'Etat de la Pupille pendant l'Anesthesie Chloroformique, l'Asphyxie, et sur certaines Effets de l'Apomorphine. Par MM. Budin et Coyne. Paris. 1875.

The first of these pamphlets details the researches of the authors to determine the condition of the pupil during anæsthesia. Their experiments were undertaken in consequence of the opposite statements of various authors. They conclude that, when chloroform is given, during the stage of excitement the pupil may be widely dilated or may remain in an intermediate condition between dilation and contraction. In the next stage the pupil slowly contracts, but at once dilates under a stimulus, such as the commencement of an operation. In profound anæsthesia, the patient being unconscious to every stimulus, the pupil is contracted.

The second pamphlet is a reply to Schiff, of Florence, who disputed the conclusions of MM. Budin and Coyne, maintaining that the pupil is dilated instead of contracted. They therefore undertook a new series of experiments, which completely confirmed the first. As Schiff experimented only on dogs, and employed a bag in which he enclosed the muzzle of the animals, our authors suggest that the dilatation of the pupil he observed was not caused by anæsthesia, but by asphyxia. The question is of great interest to all those engaged in the administration of chloroform.

On Psoriasis and Lepra. By Geo. Gaskoin, M.R.C.S., &c. London: J. and A. Churchill.

Mr. Gaskoin is well known to the profession as an occasional contributor of papers on dermatological matters to the medical journals. He has now published a work "On Psoriasis and Lepra." A good many cases are recorded in different parts of the book. We notice that Mr. Gaskoin believes cold baths to be an exciting cause of psoriasis. This may have been the case in his practice. After a most careful perusal of his work, we do not find therein anything that is not already known to the profession; but at the same time mean no disparagement to his endeavour to tell us all that is useful as regards the treatment, causes, affinities, and varieties of the disease treated of, which, by the way, is very seldom really "cured," relapses being the rule.

As regards the course and character of psoriasis, Mr. Gaskoin believes (page 35) that, when acutely inflamed, the part affected may have been formerly the seat of a chronic eruption of same disease: thus, "the acute form is an aggravation of the chronic, in which it commonly begins, and this may light up suddenly into flame with those symptoms already described, among which occur a more painful tingling and pruritus, and a sensation which is mentioned as heat in the blood. Very often this happens in a gouty, or rheumatic subject, or in one who labours under some organic defect." The scalp our author has found generally attacked by the disease in addition to the elbows and knees. The axilla and bosom seem to him to suffer least. No scars follow an attack of psoriasis, as in other cutaneous diseases; but the part attacked is frequently stained of a brownish colour.

The work concludes with a large number of formulæ for mixtures, lotions, ointments, &c.

New Inventions in Surgical Mechanisms. By Richard Davy, F.R.C.S., Surgeon to the Westminster Hospital and to the Surgical Aid Society, London. London: Smith, Elder, and Co. 1875.

Mr. Davy appears to have paid a good of attention to surgical mechanism, and in this little pamphlet he gives us engravings and descriptions of a number of useful instruments designed by him.

The first two diagrams exhibit the form of operating-needle exhibited by him at the Medical Society of London in 1868, and which appears to be superior to all the needles in common use. Several instruments for the treatment of talipes are figured; also some retentive catheters and stricture dilators, in which a good deal of ingenuity is displayed. Lastly, we may mention a post-mortem skull tractor, drill, and saw, the use of which must be a great improvement on the clumsy and dangerous method still practised for removing the skull-cap in the post-mortem theatre.

Professor H. Fraser Campbell has reprinted from the *Atlanta Medical Journal* a *résumé* of a report on "Uterine Displacements." He holds that posture treatment is of the greatest importance, but that it must be supplemented by pneumatic pressure. He advises in all cases the use of the "knee-and-breast posture," in which care should be taken that the thighs are absolutely perpendicular to the surface of the bed, and that the spine must not arch upwards. But posture alone is not sufficient to remove the malposition unless air can enter the passage so as to prevent suction. Dr. Campbell has invented a simple tube which the patient can herself apply nightly while in the position named, and he thinks no instrument ought to be applied until his simple method of providing pneumatic pressure has been proved to be insufficient for the case. Dr. Campbell's plan would certainly save many women from the use of pessaries as well as from dependence on their medical attendants.

Dr. Lyttleton S. Forbes Winslow has revived the *Journal of Psychological Medicine*, which was conducted by his late father, but has been for some years discontinued. No. 1 of the new series opens with an article entitled "In Memoriam." It shows clearly enough that the late Dr. Forbes Winslow was a self-made man, who made his way by indomitable perseverance and talent. The labours—physical and mental—which he underwent when carrying on practice and reporting for the *Times* would certainly have undermined a less sturdy constitution. Dr. J. M. Winn contributes an article on "Materialism," in which he severely criticises Professor Tyndall's address as President of the British Association for the Advancement of Science, and also the more recent utterances of Dr. Wilks in the *Journal of Mental Science*. We have been very pleased with this paper, although we should have liked it even better had the author, in revising his proofs, struck out the superfluous adjectives, which constitute the only weakness of his style. He proves himself to be thoroughly well-read in Herbert Spencer, Darwin, Huxley, and other recent writers, and at times he throws out epigrams worthy to rank with that attributed to Max Müller—"that protoplasm, after creating everything in the universe, finished by creating itself."

From the tone of this and other articles, we trust that Dr. Winslow's journal will worthily represent English psychology, especially as the *Journal of Mental Science* seems lately to have become a mere organ for the propagation of materialism.

The "Treatment of Melancholia," by Brierre de Boismont, is the next article, and is followed by one by Mr. W. A. F. Browne, on "Opiophagism," or, in plain English, opium-eating.

An admirable article by the editor, on "Religious Insanity," and other articles by Dr. J. G. Davey and Dr. H. Sutherland, with much other interesting matter, complete the first number of the new series, which is to be issued half-yearly.

We have also before us the first number of a new monthly, *The Veterinary Journal*, edited by Mr. Geo. Fleming, of the Royal Engineers, whose opinion on diphtheria we quoted in our late article on the subject, and whose works on veterinary science place him in the front rank of his profession. It is certainly in the power of the "vets." to contribute not only to their own department, but to the general progress of physiology, pathology, and medicine, and we hail the appearance of *The Veterinary Journal* as an indication of their earnest intention to do so.

SPECIAL DEPARTMENT.

QUARTERLY REPORT ON DERMATOLOGY.

Compiled for The Doctor by H. S. Purdon, M.D., L.R.C.P.,

Physician to the Royal Belfast Hospital and to the Hospital for Skin Diseases, &c.

PELIOSIS RHEUMATICA, OR PURPURA RHEUMATICA.

By F. P. Kinnicutt, M.D.

The coincidence of certain erythemata, *e.g.*, erythema papulatum, tuberosum and nodosum, with rheumatismal affections, had long excited the attention of observers, when in 1829, Prof. Schonlein, under the title of Peliosis Rheumatica, described a purpuric form of eruption occurring with rheumatismal symptoms, *i.e.*, acute articular pains; he regarded the characteristics of the affection to be sufficiently marked to entitle it to the position of a new and independent disease. Later we find mention of peliosis rheumatica by Fuchs, Hebra, B. Arnold, Wunderlich, Neumann, and other German observers. The eruption is thus described by Bazin: "Red spots more or less regularly oval, and of which the longest diameter, parallel to the axis of the limb, varies from some millimetres to four or five centimetres, projecting at their centre to about the size of a pea, a hazel-nut, or a small walnut, and which gives to the finger in passing from the well to the affected parts the sensation of a real nodosity, inclosed in the subcutaneous cellular tissue; the colouration of the affected parts passes successively from red to dark red, and soon gives place to a blue and greenish ecchymotic tint, indicative of an extravasation of blood into the subcutaneous connective tissue. Finally, an obscure fluctuation is often felt in these tumours, but suppuration or ulceration is never observed." Dr. Wilson's description coincides with Hebra's and Bazin's, and it is to an erythematous dermatosis, presenting like characteristics, that the term erythema nodosum has been applied by our own observers. Are we not therefore justified in concluding that the only points of resemblance between the eruption of this affection and that of purpura rheumatica consist in an extravasation of blood, occurring, as we know, in various dermatoses, and a certain tendency to recurrence?

The question which first presents itself to us is the possibility of a real differentiation of this affection from the diseases with which it has been asserted to be identical—*i.e.*, from purpura in the common acceptation of the term on the one hand, and from erythema nodosum on the other. The eruption of purpura simplex closely resembles that of the peliosis rheumatica as regards its colour, dimensions, its preferred seat, its tendency to recurrence; yet in the one we find prominent articular symptoms, in the other an absence of them; for the soreness and tenderness of the affected parts, the muscular pains which are always present in greater or less degree in purpura simplex, can in no way be confounded with the acute pains, attacking by preference the large joints, and as a rule confined to these situations, in the purpura rheumatica. May we not regard this symptom of the latter affection sufficiently characteristic to distinguish it from what is ordinarily known as purpura simplex?

The severe constitutional disturbance, the large ecchymoses, their extension to mucous membranes, the occurrence of hæmorrhages into the mucous cavities in purpura hæmorrhagica, are never observed in the disease under discussion.—*Archives of Dermatology*, April, 1875.

MORPHIA SUBCUTANEOUSLY IN HERPES.

In a case of herpes zoster, Dr. Giné, of Paris, injected subcutaneously a third of a grain of morphia in fifteen drops of water. This was followed by immediate relief to the itching, rapid resolution of the inflammation followed, and in four or five days no remains of the affection were present except desquamatory skin. The author concludes that this case confirms the opinion of Hebra, that the zona is an eruption corresponding to the termination of certain cutaneous nerves; that topical applications are almost useless; and that the subcutaneous injection of morphia should be generally adopted.

PITYRIASIS CAPITIS.

Dr. Malassez recommends the following ointment to be thoroughly rubbed into the scalp morning and evening:—

℞ Butter of cacao,
Castor oil,
Oil of sweet almonds, āā ℥i.;
Turpeth mineral, grs. xv. M.

The hair should be cut short, and the head washed with an alkaline soap every other day.

ON DISORDERS OF PIGMENTATION.

By A. Garden, M.D., Civil Surgeon, Mussooree.

Disorders of chromatogenesis consist in variations in the amount, distribution, and occasionally colour, of the pigment normally found in the rete mucosum, the formative layer of the epidermis, where it exists in the form of fine granular brownish yellow pigment corpuscles, lying in the ordinary epidermic, and not in special, cells. The pigment granules are found mostly in the lowermost layers of the rete mucosum, and the colour gradually diminishes in the uppermost layers, so that it is almost imperceptible in the epidermic scales. On the amount of these granules depends the varying depth of tint of the skin in different parts of the body, in different individuals, and in different races. They exist, accumulated round the nucleus, and dispersed less numerously through the rest of the cell. The nucleus of the cell, in the epidermis of the negro, appears to consist wholly of pigment granules, while in the European there is a greater or less admixture of coloured and uncoloured granules. When the granules are examined separately they offer very little indication of the depth of colour which is produced by their accumulation; some have the hue of amber, while others scarcely exceed the most delicate fawn. The depth of colour of the deep stratum of the epidermis of the negro is evidently due to the composition of that layer, of these granules chiefly. Pigment bearing cells are most abundant in the furrows of the derma, and in the hollows between the papillæ. They are also met with in the various inflexions of the epidermis constituting the lining of the sudoriparous and sebiparous glands and hair follicles.

Chromatogenous disorders are confined to abnormal conditions of the colouring matter found in the rete mucosum; and consequently all other pigmentations found, in the shape of dark coloured and black masses, in other layers of the integument, in connective tissue, or in new formations, are excluded from the definition. They are further marked by the absence of any marked change in the dermal structure, whether the pigment be in excess or deficient.

Albinos, in whom the dermal pigment is wholly absent, are met with in all nations, though, as Bostock writes—"If we are to place any confidence in the accounts of travellers, the albino is much more commonly met with in tropical climates, especially in the western parts of Africa and in Darien, than in the more northern regions." This is by no means improbable, just as leucopathia acquisita is more common amongst the dark skinned races, though travellers may have been greatly misled by the fact that savage rulers may have collected together all they could find as natural curiosities; as would appear from the passage quoted by Bostock out of Bowdich's "Mission to Ashantee." The king had at his court nearly one hundred negroes of different colours, through the shades of red and copper to white. He also states that they were generally diseased and emaciated; some of these were probably albinos.

They are found in all countries of Europe; thus Blumenbach states that he had seen sixteen in Germany.

In Northern India they are probably not more numerous than in Europe. In sixteen years I have seen only three natives and one European albino, and these only accidentally, as they do not figure in medical returns. Two of the natives I saw at Ghazeepore: both were girls, and the children of the same parents, whose third child was of the normal brown colour like the parents. In 1857 they were thought for a long time to be of European parentage. The third native lived at Saharunpore.

The appearances are well known. The skin and hair are devoid of colour, the former in the European being of a pink tint, and in the dark-skinned races of a dead milky white, due to some condition of the skin which prevents the red colour of the blood, in the superficial vessels, being seen.

The hair is white, most often fine, soft, and silky, sometimes harsh and coarse.

It is hardly necessary to state that albinos are not a peculiar race, the individuals affected retaining the characteristic features of the family and nation to which they belong. Both sexes are liable to the condition, males perhaps rather more than females.

It is undoubtedly hereditary, *i.e.*, when once produced there is a tendency to reproduction by hereditary descent. The offspring of an albino and normally coloured individual need not show any traces of albinism, and it may also show itself in alternate generations, and occasionally after all trace of albinism in the family had been lost or forgotten, as in the case quoted by Darwin from Dr. Devay, where two brothers married two sisters, their first cousins, none of the four nor any relation being an albino, but the seven children produced from this double marriage were all perfect albinos. One of a family or the whole may be albinos. What would be the result of marriage between two albinos has not yet been put to the test.

Kaposi and others mention the occurrence of partial connate albinism, in the form of pied negroes, the condition remaining during life unchanged, or even becoming more extensive, but never improving. He believes he has seen such cases in white people. I have never seen or heard of a case in this country, but there is no reason why they should not occur.—*Indian Medical Gazette*, May, 1875.

ÆTIOLOGY OF INFANTILE ECZEMA.

A very good review of Dr. R. W. Taylor's paper on Infantile Eczema appears in the *Chicago Medical Examiner* for May. After some remarks on the characteristics of scrofula, is considered the relation between that affection and eczema. Scrofula engrafts a tendency to inflammation on the skin and mucous membrane, but there is nothing specific about it. Eczema bears the same relation to it as a bronchial or intestinal catarrh for instance. It has, however, an exciting cause also. This is usually only a small furuncle or other insignificant local irritation. The scrofulous form of eczema generally invades extensive surfaces, and is deep-seated, rebellious to treatment, and subject to relapse. Is eczema hereditary, there being no other deviation from normal health in the economy? Hebra answers this question in the negative, and Tilbury Fox in the affirmative. Dr. Taylor agreed with the latter, and showed that ichthyosis, xeroderma, nævi, &c., were transmitted in the same way. The explanation of this heredity is, that one portion of the organism alone is stamped with a deviation from the normal condition, and not the whole system. There is, therefore, no proper eczematous diathesis, though a predisposition to cutaneous inflammation is often transmitted from parents to child. He then spoke of the relation between an eczema and other skin diseases in children. The debility following the exanthemata, particularly measles and scarlatina, is especially favourable to eczema, as well as to nasal catarrh, and other evidences of depressed vitality. Any inflammation of the skin predisposes the heart to the same or similar attacks in the future, owing to the impressions made on the blood-vessels, nerves, &c. Vaccination and other local irritations induce a local tendency to inflammation. Sometimes, however, this tendency affects the whole integumentary surface, though the attack is generally most severe at the point of irritation. Finally, the violence and duration of the first local affection have a direct influence on the severity of subsequent attacks. Eczema, then, has a local origin in children, but it does not begin spontaneously. It is due primarily to some irritation, and is modified by the scrofulous diathesis, or some of the other conditions alluded to. The eruption when on the head is often due to the too vigorous use of soap and water, sebaceous accumulations on the head from neglect of cleanliness, pediculi, furuncles, irritating discharges from the eyes, nose, or mouth, rough woollen clothing, and the direct action of cold air. Dr. Weisse considered xeroderma, ichthyosis, and eczema, all manifestations of one tendency, all being found in tissues of very low vitality, and called attention to the influence of dentition in producing eczema. Dr. Taylor explained that he had purposely omitted to speak of such reflex influences as dentition, so as to make his argument as simple as possible.

ON GOUTY AFFECTIONS OF THE SKIN.

Sir James Paget, in the early part of the lecture, pointed out the relations existing between gout and various forms of diseases of the skin, such as psoriasis, eczema, urticaria, prurigo, pruritus, &c. These relations were not to be found in any anatomical features, or in any peculiarity of appearance: an eczema or a psoriasis in a gouty person could not generally be distinguished by its own characters from one that occurred in a patient who had no gout. It was in connection with the treatment of these cases that the diathesis was important. It was as necessary, or rather much more necessary, to consider the person's constitution than the specific characters of his local disease. In following this rule, we must look to all the circumstances and antecedents of the case. For example, if eczema were found in a patient who had already had gout in its regular form, there must be a strong suspicion that the eruption depended on gout, and it must be treated in this view: such treatment was as much called for here as it would be in a case of inflammation of a joint in one who was known to be gouty; and the same must be held for psoriasis, or any of the forms of prurigo. If they were met with in those who presented some of the minor signs of gout that had been described in former lectures, or even if they were seen in the elder members of families in which gout was very prevalent, it must be carefully considered whether they were not dependent on the same constitutional defect, whether they were not incomplete gout appearing in the skin, just as, in another man, it might appear in the bronchial tubes, or in the proper texture of the lungs, or in the joints. One character which these affections of the skin evinced in common with other gouty diseases, was the sudden manner in which they were often developed: thus they might occur suddenly in the night, without any previously suspected cause, unless it were some indigestion or some unusual diet of the day. This peculiarity was well marked in the more acute cases of gouty eczema, and gouty psoriasis of the skin. And some help in diagnosis could be gained from the observation that they were uniformly made worse by those articles of food that were notoriously bad for complete gout—fermenting drinks, beer, champagne, hard food, salt, &c. However, this was a point on which too great reliance was not to be placed, for nearly all skin diseases, both acute and chronic, were made worse by the kinds of food just mentioned. There was a short rule that used to be given in the out-patients' room, and it certainly was a good one. The patients were told to have nothing salt, strong, sour, or sweet. It might seem that such a rule shut patients out from all the comforts of life in respect to diet: it was meant, however, merely as a rule against the excessive or too ample quantities of strong drinks, acids, salt, and sugar, which many persons habitually used in their diet. But the main point to be insisted upon was that, in the study of all affections of the skin occurring in elderly persons, the question whether the disease was associated with a gouty constitution should be looked to, for if this were forgotten, treatment would be very likely to fail. Here a caution was given against a danger that might arise out of the present method pursued in the nomenclature of skin diseases. Their classification had grown very minute of late, and it was founded mainly on an anatomical basis. There was nothing in it that could afford any indication of the constitutional condition with which the various forms of disease were associated; and there was certainly some likelihood that this important side of the question might be overlooked. Among other cases of skin disease in relation to gout, were ulcers of the integuments, which followed collections of urate of soda in the form of chalk-stone. Where these collections occurred, repeated attacks of inflammation in the skin over them ensued, and then an ulcer formed, weeping out continually a thin ichorous pus, with chalky matter. These ulcers, which were very troublesome to manage, might be treated with water-dressing, or with solution of soda, until the deposit was removed, and then, to promote their healing, with solution of nitrate of silver painted over their surface.—*British Medical Journal* for June 5th.

LEPROSY.

The following extracts are from a valuable paper by Dr. Gavin Milroy (*Medical Times and Gazette*, July 17th):—

While writing the previous article I received a copy of Dr. V. Carter's elaborate and stately treatise on Leprosy—a letterpress of 251 pages, royal folio, and fifteen coloured plates from drawings by the author—issued from the India Office. No one certainly has of recent years worked more indefatigably and ably than this gentleman in endeavouring to elucidate this obscure and hitherto much neglected disease. His observations on its symptomatology and minute anatomy have been specially valuable. It is now many years since he began his researches in the Jamsetjee Jejeebhoy Hospital in Bombay, following in the footsteps of one of his predecessors connected with the Grant Medical College in that city, Mr. Lisboa, whose attention had been drawn to the subject at the instigation of Dr. Morehead. In 1862 he published an excellent article in the "Transactions of the Medical and Physical Society of Bombay," and in the following year one in the January number of the *British and Foreign Medico-Chirurgical Review.* It was also in 1863 that his replies to the interrogatories of the College of Physicians were communicated to the head of the Bombay Medical Department; these are published in the Report of the College, pp. 108-13. His experience up to that time had led him to regard the disease as a "cachexia of the system," or "constitutional affection having a peculiar local manifestation," and to state that he "had not met with any evidence of the contagious nature of leprosy, such as would bear sifting and then be conclusive." In his article in the *Medico-Chirurgical Review* he had added that he had "seen several leprous husbands with healthy wives, and *vice versâ*; and in the immediate neighbourhood of the Dhurmsalla, where lepers are continually visiting, the disease is said not to have appeared." Mr. Lisboa had come to the same conclusion ten years before, from his experience in the same institutions. "I have seen no instance," writes this gentleman, "in which the propagation of this disease by contagion could be proved. On the contrary, I know that females suffering from leprosy have lived with their husbands for upwards of a year after the disease had fairly and unmistakably set in, without having transmitted it to them or to other members of the family living under the same roof; and I can also bring to recollection instances of men not transmitting the disease by contagion to their wives and children."

It is to be observed that about sixty leprous patients are annually admitted into the General Native Hospital (the Jamsetjee Jejeebhoy Hospital) of Bombay, and that not a few of the sufferers end their days there. In the Dhurmsalla, or refuge for the homeless, there are generally about a hundred inmates at all times, and usually very many are lepers. In the former institution "the leprous patients are not segregated, and, in the latter, the lepers and blind together form the mass of the resident poor."

Subsequently to the expression of the above sentiments, Dr. Carter seems to have met with facts which induced him to modify or reverse the opinions he previously held. In his Report on Leprosy in Norway, 1874, he avoided declaring the results of what he saw and heard there in reference to the subject of contagion; and even in his present work he does not distinctly or unequivocally state his views, but rather leaves the reader to conjecture what they may be. The following extract contains the clearest exposition of his present sentiments:—"A strong inclination to admit the possibility of leprosy being transmitted in some way from the diseased to the healthy is manifested by many late writers; but hitherto the idea has not gained in clearness. Since my visit to Norway and acquaintance with the late investigations made in Bergen, the possibility in question has become for me tolerably definite; and it would even appear that not only is the *contagium* 'particulate,' but that it may belong to the class of organisms called by De Bary, 'Schizomycetes,' and including the various forms of bacteria, micrococcus, &c."

With respect to the "decline of the disease in Norway" since the institution of leper asylums in 1856 (the asylums are all on the principle of the voluntary, and not compulsory, seclusion) being regarded as a proof of its contagion. It seems somewhat strange that this inference does not appear to have occurred to the mind of any of the Norwegian physicians, even of those who suspect that contagion may have occasionally something to do with its propagation. Dr. Hansen does not, as far as I know, allude to it; and Dr. Bidenkap—who resided for two years in the leper districts, and examined in that time between five and six hundred cases—writes thus in his work, "Leprosy an Endemic Disease in Norway":—

"At present, however, I believe one is justified in supposing that if the disease can possibly be transmitted by contagion, it, nevertheless, occurs very seldom, and has no serious influence on the spread of the disease." . . . . . "One has as little reasonable ground for considering the disease as contagious in the districts where it appears as one has from older historical accounts of the disease."

Certainly none of the medical men in Norway appear to be so hopeful as Dr. Carter that "the scourge of leprosy might be stamped out" in any country by the mere multiplication of leper asylums on the model of those of their country.

AT THE SOCIETIES.

AT THE ROYAL SOCIETY.

June 17th, 1875.

ON THE PRODUCTION OF GLYCOSURIA BY THE EFFECT OF OXYGENATED BLOOD ON THE LIVER.

By F. W. Pavy, M.D., F.R.S.,

Physician to and Lecturer on Physiology at Guy's Hospital.

The author referred to a former communication to the Royal Society on "Lesions of the Nervous System producing Diabetes" ("Proceedings of the Royal Society," vol. x., 1859-60), in which he made known that division of certain parts of the sympathetic system occasioned the presence of sugar in the urine. The results given in that paper showed that there were other means besides Bernard's celebrated experiment of puncturing the floor of the fourth ventricle, by which artificial diabetes could be induced, but they did not explain the reason of the appearance of the sugar, and the author still sought to discover something on this point. The inquiry was pushed in various directions, but always with a fruitless issue until the summer of 1874. The author for some time past has been led to look to an altered condition of the blood flowing to the liver as likely to prove the most probable cause of the transformation of amyloid substance into sugar, which evidently constitutes the foundation of the artificial diabetes following operations on the nervous system. Schiff is of this view, and (*Journal de l'Anatomie et de la Physiologie*, Paris, 1866), has referred the escape of sugar from the liver, and thence the production of glycosuria, to the development of a ferment in the blood as a result of the hyperæmia (not necessarily of the liver) which follows the operations on the nervous system which occasion artificial diabetes; but, although the author has carefully examined this opinion, he cannot obtain evidence of the development of a ferment in the manner asserted. He has further tried the effect of introducing a secretion,—viz., saliva, into the circulatory system, which is known to act as an energetic ferment upon the amyloid substance of the liver, and on one occasion he found, from some cause or another, that the urine became, to a moderate extent, saccharine, but in a large number of other experiments the operation was attended with a negative result.

Having so far proceeded without success, it occurred to the author to try the effect of introducing defibrinated arterial blood into the portal system. He was led to experiment in this way from having some time previously observed that when arterial blood only was allowed to flow through the liver, as, for instance, when the portal vein was tied and the hepatic artery left free, sugar escaped from the organ to such an extent as to render the contents of the circulatory system strongly saccharine. This result he had commented upon as being somewhat surprising, and as furnishing evidence standing in opposition to Bernard's glycogenic theory. He had not succeeded by the operation in producing glycosuria, because, as it appeared to him, no urine was secreted, owing to the ligature of the portal vein leading to such a diversion of blood from the general circulation by the accumulation occurring in the portal system, that the flow through the kidney was too slight to allow of it. He had endeavoured to overcome this obstacle by connecting, through the medium of a canula, the portal with the right renal vein after ligaturing the corresponding renal artery. If the experiment had succeeded, the liver would have been left with its arterial supply, but the portal stream would have been diverted and made to reach the inferior cava without traversing the hepatic vessels.

As regards the operation, this the author found he could accomplish, but each time he performed the experiment the object he had in view was frustrated by the canula becoming quickly filled with a plug of blood-clot. It was whilst under this difficulty that the thought of collecting blood from an artery, defibrinating it, and then introducing it into the portal system, occurred to him. He had considered it possible that same slight effect might be perceptible, but had not anticipated the strongly marked result which is producible. The amount of blood used has been from ten to eighteen fluid ounces. After the production of anæsthesia by chloroform, the blood was collected from the carotid artery, stirred in order to defibrinate it, strained, and then very slowly injected into a branch of the mesenteric vein. In one experiment, where half an hour had been employed in making the injection, the urine at the completion of the operation contained a notable amount of sugar, and half an hour later showed by analysis the presence of fifteen grains to the fluid ounce. In a second, the urine contained ten, and in a third fourteen grains to the fluid ounce when collected three quarters of an hour after the operation. The experiments were performed upon dogs, and in each case it had been ascertained that the urine was devoid of sugar before the operation.

Having noticed the effects which have been described from the injection of oxygenated blood into the portal system, it became necessary to ascertain positively that it was attributable to the oxygenated condition of the blood, and not to any other cause. To decide this point, an appeal to the counterpart experiment was made. Defibrinated venous instead of arterial blood was injected into a branch of the mesenteric vein, and upon each occasion where such an operation has been performed a negative result has been obtained.

With the evidence thus furnished, the conclusion may be warrantably drawn, that oxygenated blood in some manner influences the liver so as to lead to the production of glycosuria. It may be inferred that, contrary to the effect of venous blood, it promotes the transformation of amyloid substance into sugar. The suggestion naturally occurs, that what has been stated above affords an explanation of the glycosuria occurring after Bernard's puncture of the fourth ventricle and the various lesions of the sympathetic. Without any new agent being called in, sufficient is presented in the state of the blood to account for the production of sugar that occurs. By a vaso-motor paralysis affecting the vessels of the chylopoietic viscera, the blood will reach the portal system without having become dearterialised in its natural way, and in this state it has been shown by the experiments narrated to possess the property of acting within the liver in such a manner as to determine the production of glycosuria.

IN THE LABORATORY.

PHOSPHORUS.

In the *Répertoire de Pharmacie* M. Méhu writes on the subject of the administration of phosphorus. He thinks that most of the preparations in use are open to objections more or less serious. The preparation of the phosphoretted resin proposed by Mr. Gerrard, and lately referred to in our columns, is dangerous, and almost impracticable without special appliances. M. Méhu, moreover, considers that it is an unsuitable preparation, because some of the phosphorus separates in the solid form after a time. The use of solid phosphorus is condemned by M. Méhu. Non-saturated solutions, in his opinion, alone present the phosphorus in an extreme state of division, and allow of a certain and regular administration. He says that we should remember that phosphorus only fuses at a temperature of 40° C. (= 104° F.), that is, at a temperature higher than that of the human body, and that only as much phosphorus can be absorbed as is in a soluble state. The experiments of Reveil and Personne prove that large pieces of solid phosphorus can be swallowed by dogs with impunity. Mr. Abraham has proposed the substitution of balsam of Tolu for the resin, but this preparation is as insoluble as Mr. Gerrard's. M. Méhu also condemns phosphoretted wax, phosphoretted spermaceti, phosphoretted ether, and amorphous phosphorus.

Phosphoretted ether is open to the serious objection that by the rapid evaporation of the ether phosphorus is deposited in the solid form on the tongue of the patient, and when phosphoretted ether is given in capsules a similar deposit of solid phosphorus in the stomach is to be feared.

Mr. J. Williams has proposed the use of a solution of 12 grs. of phosphorus in 9 fluid ounces of glycerine and an equal quantity of alcohol. But this solution deposits part of the phosphorus, a common fault in supersaturated solutions. With respect to the so-called solution of chlorophosphide of arsenic, obtained by allowing hydrochloric acid to act upon phosphorus and arsenic in a fine state of division, M. Méhu says that this is neither a solution of free phosphorus nor of chlorophosphide of arsenic, but a hydrochloric solution of varying composition containing oxygen products of arsenic and phosphorus. He also thinks phosphide of zinc cannot be considered as a medicament presenting free phosphorus to the system.

The preparation which M. Méhu most approves of is phosphorated oil. As the investigations of M. Méhu were adopted as the basis of the phosphorated oil of the British Pharmacopœia, our readers will no doubt think his opinion on the subject worthy of attention. It has been stated that the oil is an unsatisfactory preparation, because when exposed to the air the phosphorus contained in it readily oxidises. M. Méhu, however, points out that this result may easily be obviated by the addition of a few drops of ether to the oil.

It will interest our readers to learn in connection with this subject that Dr. Frowert has communicated to the Philadelphia College of Pharmacy a series of experiments tending to show that phosphorus pills prepared in the usual way may quickly pass through the body unchanged. He found that when cacao butter was used as an excipient this was not the case, and in half an hour after taking there was a strong odour of phosphorus in the breath.

NOTES, NEWS, AND GOSSIP.

Physic in Food.—Watercress has long had the popular reputation of being a powerful antiscorbutic. Probably all the *Cruciferæ* equally deserve this title. M. Dupuy says that the plant contains an essential oil of which sulphur forms a constituent, and that he has also discovered in cress—iodine, iron, a bitter extract, and phosphorus. He therefore adds these minerals to the soil to increase the quantity in the plant, and then prepares a *succus*. He has established cress-gardens for the culture of this plant in order, as he says, to vegetabilise (!) the minerals which give it such important properties.

This reminds us that long ago an Italian writer proposed to obtain iodized milk for his patients by feeding cows on hay sprinkled with a solution of potassium iodide. We wonder if the cows would like the flavour. More recently, an English writer says that the cows on the island of Ushant, off the coast of Brittany, feed principally on sea-weed, and that consequently their milk is particularly rich in iodine; and it is proposed that this milk be used for the cure of diseases benefited by iodine, as it does not produce the constitutional disturbances that often result from the administration of iodine in other forms.

Last of all, it has been reserved for a French physician to iodize eggs by electricity. The arrangement employed can be easily understood when we say that he conveys the iodine into the egg by what we may call electrolysis.

By any of the above methods physic is to be put into the food of invalids without imparting any disagreeable flavour.

Woman's Dress and her Diseases.—In an address before the Pennsylvania Medical Society, the president, Dr. Atlee, drew attention to the bad effects of the change wrought by absurd fashion in the habits and dress of women. He held that in proportion as women have departed from simplicity, in that same proportion have their infirmities increased. The confined waist and weighty dress of women were mercilessly ridiculed. Fashionable women were compared to pea-fowls strutting the streets and taking a scavenger-like promenade, gathering filth and exhausting strength. The pernicious effect of the fashionable shoe was explained. Nature intended the heel and sole to be on a level, but fashion raises the heel two inches above this level. Woman is thus walking down hill, and as far as health is concerned may be said to be going down hill all the time. The fashionable woman is a burlesque and caricature on nature.

The Harveian Oration.—This year the Harveian Oration has been delivered by Dr. Guy, who traced with a master-hand Harvey's researches into the circulation, showing how his discovery was the result of much industry and patience—no mere happy guess. Nor was it merely a discovery; it was a demonstration. "This demonstration was in part a refutation of ancient and prevalent errors, but also a revelation of new truths wrought out by as felicitous a combination of original talent, acquired learning, and unwearied industry as ever met in one man."

Demarquay.—This great French surgeon is no more, having died, at an advanced age, from cancer of the stomach, and his *éloge* has been pronounced in the Academy of Paris by M. Ricord, his fast friend for more than thirty years, and who concluded his oration by stating that "Démarquay died like Trousseau—the same disease, the same self-abnegation, the same tranquillity of soul, the same sublime example of how to die worthily."

Insecticides.—A tincture of nux vomica prepared with caustic solution of ammonia is recommended as the best of insecticides. Bed-bugs, cockroaches, &c., are at once destroyed by it, and it is said that if a horse's harness is painted with it, the flies will avoid him. We have found carbolic acid effectual. Against ants, castor-oil is found an entire protection.

Guarana.—Gravelle, who wrote in 1840, said that guarana stimulates and at the same time soothes the gastric system of nerves, and reduces the excited sensibility of the cœliac plexus, thereby diminishing febrile action and strengthening the stomach and intestines, particularly restraining any excessive mucous discharges, at the same time increasing the action of the heart and arteries, and promoting diaphoresis.

A Doctor's Picnic.—The *Medical Record* says that Dr. Bullard, of New Haven, Conn., has been in practice for about half a century, during which he has been present at the births of about one thousand children. Such of these children as survive propose to have a grand picnic at the doctor's residence, and the whole affair is to be under a committee of arrangements from the adjoining towns.

Small-pox in French Hospitals.—Small-pox has been treated in the general wards of the Paris hospitals for years, but of late the disease has made such inroads in the French capital, that efforts are being made by the physicians to secure separate wards.

Ziemssen's "Cyclopædia of Medicine."—On page 290 of vol. iii., second text line from the bottom, the word "ounces" should read "drachms."

A Royal Doctor.—The Prince of Bavaria, whose sister married the Crown-Prince Rudolf of Austria, has, it is stated, adopted medicine as his profession. By all accounts he will be a very successful practitioner; for he has not only received a diploma, but he has performed a most difficult operation at the Munich Ophthalmic Hospital.

A Match under the Microscope.—Those who are fond of investigations with the microscope will find a beautiful object in the head of an ordinary parlour-match. Strike the match, and blow it out as soon as the head has fused sufficiently to cause protuberances to form on it; on that part of the head which took fire first will be found a white, spongy formation, which, under the microscope and with a bright sunlight on it, has the appearance of diamonds, crystals, snow, frost, ice, silver, and jet, no two matches giving the same combination of arrangement.—*Scientific American.*

Jaborandi.—M. Ernest Hardy reports to the Société de Thérapeutique that he has obtained a second alkaloid from jaborandi.

Another Death from Chloroform.—Dr. J. R. Buist records in the *Nashville Journal of Medicine and Surgery* another instance of death under chloroform during the performance of a trivial operation. The operation in question was the reduction of paraphymosis. No incision was made, but the reduction was effected by manipulating with the fingers. Dr. Buist says he administered the chloroform on a napkin, and poured out about two teaspoonfuls each time. (The chloroform was given twice.) Dr. B. does not think the amount inhaled altogether could have exceeded two drachms. "Death seemed to occur at the instant of relieving the constriction." Nélaton's method was tried, but without success.

Fever and the Milk Supply.—Dr. Alex. Ogston, of Aberdeen, records in the *Glasgow Medical Journal* an outbreak of typhoid which, after a most careful inquiry extending to every conceivable channel of infection, was traced to the milk supply.

CORRESPONDENCE.

CURE OF JAUNDICE.

TO THE EDITOR OF THE DOCTOR.

Sir,—The treatment of jaundice is often unsatisfactory. I have lately been told of a "specific" for that disease, and which I know is really a rapid and excellent remedy. Take of "rag weed" leaves about a handful, bruise them in a mortar, strain the juice off through muslin, then blend with same as much sulphur as will lay on a shilling. This dose is given on, say Monday, Tuesday, and Thursday mornings, fasting, Wednesday being omitted. After the third dose the stool contains bile, and the disease very quickly disappears. Of course, in jaundice from malignant disease of liver it is useless. As this is the time of the year "rag weed" is to be obtained, I wish your readers who may have the opportunity would give the above a trial in jaundice and report results.

Yours, &c.
H. S. P.

OBITUARY.

Birt.—On the 10th July, at Harcourt Terrace, West Brompton, Hugh Birt, F.R.C.S.E., aged 61.

Brennan.—On the 21st June, at Brixton Road, Surrey, Geo. Brennan, M.R.C.S.E., aged 46.

Burnett.—On the 4th July, at the Cottage, Tullow, co. Carlow, Robert Burnett, M.D., aged 68.

Cameron.—On the 25th June, of scarlatina, Wm. Ewen, second son of Charles A. Cameron, M.D., aged 8.

Claridge.—On the 17th June, at Pershore, John Claridge, L.S.A.L., aged 72.

Clarke.—On the 7th June, at South Hackney, R. L. Clarke, Surgeon, formerly of St. Albans.

Collins.—On the 22nd June, at Edgeware Road, Judah Collins, L.S.A.L., aged 57.

Crichton.—On the 2nd June, at Woodside, Arbroath, J. Thomas Crichton, M.D., aged 63.

Crichton.—On the 5th July, at Mortlake, Surrey, Alexander Crichton, L.R.C.P.Ed., aged 31.

Crozier.—On the 9th July, at Arundel Street, Strand, H. Acheson Crozier, M.R.C.S.E., aged 74.

Davies.—On the 23rd June, at Bangor, Robert Davies, L.R.C.P.Ed., aged 20.

Dell.—On the 14th July, at 10 William's Terrace, Chiswick, Edward Crump Dell, M.D., &c., late of Cliftonville, Margate, aged 56.

France.—On the 15th June, at Chesterfield, William H. France, M.R.C.S.E., aged 40.

Gouthwaite.—On the 4th July, at Tranmere, Thos. Gouthwaite, M.D., aged 41.

Henderson.—On the 3rd June, at Fourdoun, Joseph Henderson, L.R.C.S.Ed., aged 69.

Hewitson.—On the 15th June, at Weardale, Darlington, Wm. Hewitson, L.R.C.P.Ed., aged 50.

Johnson.—On the 30th June, at Taunton, F. P. Johnson, M.B., aged 32

Lane.—On the 15th July, at Tullow, co. Carlow, Thomas Bagot Lane, M.B., F.R.C.S.I., aged 63.

Latham.—On the 14th June, Alfred Wm. Latham, M.R.C.S.E., of Darlaston, aged 40.

Menzies.—On the 7th July, at Westboure Park Road, Duncan Menzies, M.R.C.P.L., Deputy Inspector-General Army, aged 72.

Mitchell.—On the 2nd July, at Ladykirk House, Monkton, Ayrshire, Alex. Mitchell, M.D., R.N.

Moir.—On the 8th July, at Dicconson Street, Wigan, Lancashire, Julie Marie, the dearly beloved wife of G. C. Algernon Moir, M.R.C.S.E., L.R.C.P.L., aged 21.

Moorehead.—On the 24th June, at 837 Second Avenue, New York, John Moorehead, M.D., formerly a resident of Smithboro', co. Monaghan, aged 68.

Olive.—On the 4th July, at Buxted, Sussex, Edward Olive, M.R.C.S.E., aged 37.

Taplin.—On the 9th July, at Manchester Street, London, Thos. Taplin, M.R.C.S., formerly of the H.E.I.C.S., Madras Presidency, aged 73.

Todd.—On the 6th July, at Honley, Yorkshire (of heart disease), Joseph Todd, M.D.

Wardroper.—On the 26th June, at Epsom, Surrey, W. Wardroper, M.R.C.S., F.S.A., aged 71.

Wright.—On the 25th June, at Coonoor, Madras, Wm. Evatt Wright, M.R.C.S.E., Staff Surgeon, aged 30.

TO CORRESPONDENTS.

⁂ We beg to thank those gentlemen who have, during the past, kindly furnished us with abstracts of their lectures, communications to societies, contributions to journals or other productions, and to say that such abstracts will always receive attention.

⁂ Correspondents are requested to write legibly, and on one side of the paper only.

☞ Books for review, exchange journals, and literary communications to be addressed to the Editor of The Doctor, at the Office, 20 King William Street, Strand, London, W.C.

NOTICES.

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THE DOCTOR.

LONDON, SEPTEMBER 1, 1875.

Multum in parvo.

THE BRITISH MEDICAL ASSOCIATION.

A MEETING of the Association at Edinburgh could not fail to be successful in point of numbers, and, in fact, notwithstanding some disagreement as to the propriety of meeting there this year, the celebration of the forty-third anniversary has given general satisfaction. A similar success probably awaits next year's meeting at Brighton, although the invitation from that town was so far from unanimous that an amendment to the resolution accepting it was on that ground brought forward. The recommendation of the Committee of Council was, however, adopted, that our marine suburb is to be the scene of meeting in 1876, and Sir J. Cordy Burrows the President.

But to return to Edinburgh. The meeting from the 3rd to the 6th of August afforded an excellent excuse to many graduates of the University to revisit their *Alma Mater*, and other members of the profession could not but feel an attraction towards a medical school which has played so large a part in education, and the influence of which extends throughout the civilised world. Then the presidency of the veteran Christison was itself almost enough to ensure success; besides which the addresses to be delivered by Edinburgh men formed additional attractions. To these we must devote a few words.

Sir Robert Christison's presidential address was looked forward to with great interest. It consisted chiefly of an exposition of the system of medical education pursued at Edinburgh as contrasted with other methods. No one is more entitled to speak on this subject, and although we do not agree with all the opinions enunciated, we consider it a duty to weigh them with care. An experience in teaching of half a century gives to Sir Robert Christison's views on medical education a weight they would not have derived from the part he took in the debate on this subject in the General Medical Council, though the deliberations of that body could not be without effect on a mind so receptive and yet so critical. It is well that a great teacher should have pointed out that the rage for examination may be carried too far, and too great confidence placed in its results; that practical teaching, excellent as it is in itself, is not all that is required; and that a thorough course of systematic instruction, such as our predecessors laid down, and such as is to some extent still pursued by great educational institutions, is not without considerable value.

Prof. Gairdner, of Glasgow, in opening the Section of Medicine, took occasion to express his sympathy with Sir Robert Christison's remarks. He, too, held that the true method is not to depreciate lectures as opposed to practical teaching, but to maintain both in a high state of efficiency, and to promote this object he thought it desirable to keep the systematic and practical teaching as much as possible in one hand, so that no one should be led to become a mere lecturer, and no one a mere demonstrator of experiments. When Edinburgh and Glasgow thus, as it were, shake hands on a subject like this, we may hope that the true balance is likely to be everywhere maintained.

The Address in Medicine by Dr. Warburton Begbie was perhaps the gem of the meeting, and of this we give in another column a full abstract.

Prof. Spence delivered the Address in Surgery, which will be remembered by many as setting forth in a clear manner, on the authority of a surgeon of ripe experience, the great success that may attend careful attention to the dressing of wounds apart from the use of antiseptics. We understood him to say that out of 63 major operations in his own practice no less than 60 had been completely successful. Such a success cannot but have great influence, and will no doubt be frequently referred to by the disciples of Mr. Lister. That gentleman, however, availed himself of the opportunity of demonstrating his method before the Association, and thus the two sides of this question were ably exhibited. In several other departments of surgery Professor Spence reviewed its progress, both in reference to new discoveries and the modification of approved methods of practice.

Of Dr. Matthews Duncan's Address in Midwifery we need only say that, while full of learning, it uttered no uncertain sound.

Prof. Rutherford, in his Address on Physiology, entered a plea on behalf of vivisection, which was taken up with much greater force by Sir Robert Christison. Dr. Rutherford, however, distinctly averred that all the experiments on the higher animals that are really required for the purpose of education can be performed *with the aid of narcotics* — an admission which was alluded to with approval by Dr. Burdon Sanderson. Our readers, however, cannot have forgotten that Dr. Sanderson was, and is, responsible for the experiments performed in the

Brown Institution, and which we have shown are constantly performed *without the aid of narcotics.* Dr. Rutherford related a large number of experiments on the biliary secretion of the dog, made for the Scientific Grants Committee of the Association, and which will shortly be published.

Passing from these addresses to the general business of the meeting, we may remark that the Report was taken as read, and the government of the Association left, as before, in the hands of the Committee of Council. Mr. Pemberton, however, did not hesitate to bring on a motion instructing the Secretary, before the next meeting, to issue a circular to every member requesting his opinion as to the admission of female practitioners. This motion was carried after some discussion, in which Dr. Carpenter, of Croydon, endeavoured to show that it could not be put without seven days' notice; and Mr. Ernest Hart pretended that it would be necessary to submit the matter to the Board of Trade. Nothing could be more absurd. To ask the opinion of members by circular is not to pass a resolution; and it will be time enough to consider whether a resolution could be lawfully carried when the result of the appeal to the members is known.

The reports of the committees were all carried, the only important one being that proposing three hundred pounds for scientific grants for the coming year—not a very large sum out of such an income as that now enjoyed by the Association.

The papers read in the sections were numerous and interesting; but to these we shall have an opportunity of referring from time to time as they are published.

CHRONICLE.

THE THERAPEUTIC ACTION OF IPECACUANHA.

M. C. A. Polichronie has recently published a work on this subject, in which he arrives at the following conclusions:—

1. Emetine is the true active principle of ipecacuanha.
2. In dysentery, as in diarrhœa, ipecacuanha, administered as an enema, produces the same effects as when given by the mouth.
3. Ipecacuanha, as an enema, is one of the best treatments which can be employed in infantile cholera.
4. In the diarrhœa and sweating of phthisis, enemata of ipecacuanha give the best results.

PRECAUTION AGAINST PUERPERAL INFECTION.

At a meeting of a medical society in St. Petersburg (*Rundschau*), Dr. Grünewaldt detailed the measures which were adopted at the lying-in asylum of that city to prevent infection. Acting on the theory that some wound or laceration of the parts concerned in labour presented a nidus for the reception of the disease, attention was also directed towards these points, and the results had been happy. The most common starting-point was held to be the vagina, or the mouth of the womb; at these points the poison was absorbed and the disease travelled onwards along the planes of connective tissue. The rule observed was to examine every woman, by the aid of a speculum, immediately after labour. Every laceration or abrasion was then carefully attended to, and as soon as a morbid appearance, such as diphtheritic deposit or the like was noticed, a solution of carbolic acid in water, one part to twelve, was applied, or the sesquichloride of iron in a similar proportion. If the disease advanced, and there were signs of endometritis, injections were practised by means of the double catheter. The indications for intra-uterine injections were:—

1. Retention of the membranes.
2. Retention and decomposition of coagulated blood.
3. In lochiometra.
4. In any form of endometritis.
5. In secondary hæmorrhage.

In fact, he said it was customary to use a weak solution of carbolic acid, one part to 400, as an intra-uterine injection, immediately after labour, in all cases, by way of prophylaxis.

TO DISINFECT AND DEODORISE EXCREMENTS.

Dr. Camerers, of Ulm, has tried (*Rundschau*) some experiments with reference to this subject, using for the purpose diluted urine, and as disinfectants, carbolic acid, sulphate of iron, English sulphuric acid, and caustic lime. He has found that the sulphate of iron and the caustic lime alone are capable of preventing the formation of low organisms. He therefore recommends these latter for purposes of disinfection, as the most certain, the cheapest, the most free from danger, and as preserving their properties best when dissolved in water. Two classes of substances act as deodorants of excrements; first, such as fine sand, powdered mould or clay, &c., which form a coating over the stinking surface; and second, such substances as charcoal, which absorb the offensive gases. He states that a vault with a capacity of 20 cwt. can be rendered perfectly free from smell in the course of twenty-four hours, by scattering about in it a few pounds of pulverised charcoal. The charcoal does not, however, prevent putridity and the formation of low organisms.

DISTURBED ACTION AND FUNCTIONAL MURMURS OF THE HEART.

In the "Transactions of the N. Y. Academy of Medicine" (1875) is an interesting paper lately read by Dr. J. R Leaming. He commenced with a review of arguments adduced in a former paper of his, relating to the mechanism of the first sound of the heart. Dr. L. holds that the first sound of the heart is wholly due to vibrations of the chordæ tendinæ of the mitral valve, set in motion by the action of the blood-current. This he regards as the key to the explanation of an important share of the morbid sounds of the heart. These morbid sounds he divides into *valvular* or organic murmurs, and *intra-ventricular* murmurs, which are "more or less functional." The murmur of a valvular lesion is the "bellows" murmur of Laennec, and is a friction sound of blood gushing through a narrowed aperture. The intra-ventricular murmurs are nearly always due to irregular vibrations in the chordæ tendinæ. Their tone may vary from a soft blowing murmur to harsh sawing, rasping, or filing sounds, and where the vibrations are rapid, the tone becomes distinctly musical. Vegetations or calcifications of the valves projecting into the current of blood may sometimes be thrown into musical vibration, but this is very exceptional, it is claimed, and musical murmurs are almost invariably intra-ventricular. The intra-ventricular murmurs are termed functional, because due to irregularities in the heart's rhythm and not to valvular changes. Yet they occur in organic disease as well as in the so-called functional cardiac affections. They are believed to constitute a large majority of the morbid sounds in structural diseases of the heart, where they arise in consequence of the irregular tension of the tendinous cords produced by changes of structure. Where the intra-ventricular murmurs are purely functional, they have their source in nervous derangements, and may be traced most commonly to a disordered stomach or to indigestion.

Considerable importance is attached to the acoustic properties of the chest, as affecting the character of the cardiac sounds. Illustrative cases are given where the occurrence of pneumonia or pleurisy has caused the sudden disappearance of cardiac murmurs previously heard, and which returned with the lapse of the intercurrent disease. The reason of this is supposed to be that the pulmonary effusions interfere with the transmission of the finer heart sounds to the ear. The mechanism is illustrated by comparing the chest to a musical instrument—to a violin ; if a watch be suspended within the instrument, and a stethoscope is applied to the wall outside, the sounds of the watch will be conveyed to the ear clearly and distinctly, but if we now fill the cavity of the violin with sand or water, and then listen, no sound will be heard.

MIXED INJECTIONS OF MORPHIA AND ATROPIA IN THE DYSPNŒA OF PHTHISICAL PATIENTS.

Dr. **Forcauld** has made numerous experiments with narcotic injections upon patients under his charge, which he details at some length in *Le Mouvement Médical*. His conclusions are as follows :—

1. The mixed injection (equal parts solution of hydrochlorate of morphia 1-30 and sulphate of atropia 1-100) presents all the advantages of the injection of sulphate of atropia, without its inconveniences.
2. Six drops of the mixed injection give, as against suffocation, as good results as fifteen drops of solution of hydrochlorate of morphia.
3. That after the employment of either the morphia or the atropia alone, there is a diminution in the number of respiratory movements, in the temperature, and in the pulse.

PHLEBITIS FOLLOWING THE HYPODERMIC USE OF ERGOT.

Dr. E. P. **Allen** contributes to the *Chicago Medical Examiner* a case in which the hypodermic use of ergot was followed by severe phlebitis. The drug was given for a uterine fibroid, which appeared to diminish under its use, for the girth around the most prominent part of the abdomen decreased from 36 to 32 inches. After thirty injections severe phlegmasia dolens appeared in the left lower limb, extending over the lower left half of the abdomen. The injections were suspended and the phlebitis actively treated, but the patient could not put her foot to the ground for eight weeks, and it was three months before she could walk without assistance.

Various kinds of treatment were adopted for two years, but the tumour increased in size. Ergot was taken by the stomach three times a day for three months, and this was the only treatment which appeared to arrest the growth of the tumour ; but at length the stomach refused to tolerate it. In despair the patient desired another trial of the hypodermic method, for the girth had again increased to 39 inches. An injection was therefore made every evening. This time a solution of Squibb's *solid* extract was employed instead of Squibb's *fluid* extract, which was used on the former occasion, and the injections were mostly made on the right side of the abdomen, where they caused less pain than on the left. The girth decreased to between 34 and 35 inches in eight weeks. The right side becoming quite tender, an injection was made on the left ; this gave rise to an abscess, and treatment was suspended for a fortnight. It was then recommenced and continued for ten days, when phlebitis again appeared, this time on the right side, and, in spite of all treatment, ran a similar course to the previous attack on the left side. About three months after her recovery from this second attack a dozen injections were made in the region of the deltoid ; they gave rise to smarting and swelling, which was relieved by water-dressing. The patient feeling relieved from her distressing symptoms, the treatment then ceased, and we are not told what became of her.

Dr. Allen submits the case to his medical brethren without comment as to the action of ergot in producing phlebitis. He has used it largely, but never met with a similar case, nor have any of his medical friends ; indeed, he has never before had any unpleasant results, but several patients have complained that it produced a weakness of the action of the heart.

ACONITIA.

Dr. **John Harley** relates in the last volume of "St. Thomas's Hospital Reports" some experiments on aconitia, which was injected subcutaneously in horses, dogs, and cats, and last of all in the human subject. He injected in man from 1-2000th to 1-260th of a grain, which he considers about equal to 1-250th to 1-50th of a grain by the mouth. The injection always produced considerable local burning, pricking, and smarting, but never inflammatory action. He has come to the conclusion that the alkaloid is unfit for subcutaneous use. We have long been of the same opinion, and, indeed, after various trials, have abandoned its use by the mouth. We regard the tincture of aconite as the best preparation for internal use, and have found it very reliable. We are therefore content to leave the alkaloid for external application.

Dr. Harley believes that the heart is only secondarily affected by the drug, and that as a consequence of the respiratory difficulty produced. The impeded respiration and suffocative spasms greatly interfere with the function of the heart, and Dr. Harley thinks that the published cases of poisoning support this view. He then relates a number of cases of febrile diseases treated by the alkaloid, from which he concludes "that if it be conceded that aconite ameliorates the febrile condition, it does not much control it, and that it cannot in any degree anticipate or cut short the pyrexial stage in a disease against which, if it did possess the anti-febrifuge (anti-febrile ?) properties ascribed to it, its influence ought to be most marked."

INFLAMED BURSA PATELLÆ.

In some interesting jottings from the out-patients' room ("St. Thomas's Hospital Reports") Mr. Henry Arnott mentions that he has not derived much benefit from counter-irritation around inflamed bursa patellæ, and on one occasion he was dismayed to find that the remedy set up acute synovitis of the knee-joint. This seems to show the need of care in resorting to this kind of treatment.

TREATMENT OF STRANGULATED HERNIA.

Dr. H. R. **Allen**, of San Francisco, in a paper on the "Treatment of Strangulated Hernia," advocates the use of the dilator for the relief of the strangulation without having recourse to herniotomy. Dr. Allen says that some years ago he succeeded in reducing a few cases of severe strangulation which seemed urgently to demand herniotomy as the only hope of relief by introducing the index finger forcibly into the ring and distending it by lifting or pulling up on the stricture. He says : "I found it easily lacerated in some cases, and the tension was at once relieved ; but other cases proved more firm and unyielding, and I feared that the necessary pressure to insert the finger might be injurious ; although the tissues of the hernia rested upon a smooth posterior wall, and the finger substituted a distributed pressure instead of the sharp cutting edge of the stricture, I felt that some instrument might be devised which would enable me to accomplish the same results, without any of the apprehended dangers."

The instrument which Dr. Allen has devised he terms a dilator. "To use the instrument the patient is placed upon his back, the scrotum invaginated with the finger, which is carried up to the ring. The finger guides the blunt probe into the stricture as it would a uterine sound into the uterus." The advantages claimed for this method are that it is "perfectly safe, as the skin is not punctured and the laceration is subcutaneous. . . . The amount of laceration is perfectly at the option of the operator; and if the first attempt proves insufficient, it may be repeated. . . . One great advantage is, it is admissible at any stage, when the parts are not fatally injured, and if employed immediately when taxis fails, all the danger of inflammation or gangrene is avoided. The laceration, instead of being injurious, has so far proved an advantage, by inducing sufficient inflammation of the ring to produce adhesion, if a firm truss is at once employed, and quiet enjoined. The operation, so far, has not only been easy and safe, but a life-saving treatment, relieving strangulated hernia of its terrors and fatal results."

Further particulars respecting this method, together with a woodcut of the instrument he employs, will be found in the original paper by Dr. Allen in the *Philadelphia Medical and Surgical Reporter* for July 10, 1875. The method certainly seems deserving of a trial in this country.

A NEW DIURETIC.

Further discussion has taken place respecting the value of the milkweed (*Apocynum cannabinum*) in dropsical affections. This plant was first brought forward by Dr. Jewett in an article in the "New York Medical Society's Transactions" for 1869, and now Dr. Hutchins reports to the King's County Society very remarkable results from its use. For instance, in forty-eight hours a man described as frightfully distended was reduced to a skeleton, and any disposition to reaccumulation of water was rapidly relieved by an infusion of this drug. If not carefully given it may produce vomiting or diarrhœa, both of which are to be avoided. Dr. Jewett's mode is to put half-an-ounce in a pint of gin, add an infusion of two ounces of juniper-berries in a pint of water, and give from one to four teaspoonfuls, as the stomach will tolerate it, every four hours until the effect is obtained. He expresses unbounded confidence in it after an experience of thirty years, but he warns us that, although the *root* is officinal in the United States Dispensatory, it is only the *bark of the root* which is active. This is important, as leaves, stem, and woody fibre are sometimes sold. Dr. Armour and Dr. Burge both related cases confirmatory of Dr. Jewett's experience. The latter employed a fluid extract in ten-drop doses.

We may observe that this plant has long been known to possess emetic and purgative properties. It belongs to the natural order *Apocynaceæ*, or dog-bane order, which contains a number of poisonous plants, including the celebrated Madagascar poison-nut (*Tanghinia venenifera*). The fruits of a few species are edible; the milky juice of others furnishes india-rubber; the bark of others is tonic; and the flowers of one (*Plumieria*) are said to yield the well-known perfume frangipanni.

Perhaps some of our leading pharmaceutists may deem it worth while to import some of the *bark of the root* of milkweed, in order that its diuretic properties may be tested in this country.

REMARKABLE CASE OF GALL-STONE.

In the *Philadelphia Medical Times* Dr. J. V. Shoemaker relates the particulars of a case of gall-stone, in which 1,940 gall-stones were found impacted in the gall-bladder after death. Dr. S. says:—

"Dr. J. F. Bird was called early in the spring of 1874 to Mrs. S., who had already passed a number of gall-stones. The characteristic pains had been experienced during the passage of these stones. Under treatment the patient became somewhat relieved, but very soon a rapid emaciation commenced, and, although the appetite was good, there was no nutrition. A large movable tumour soon appeared immediately in connection with the *liver*, which was considered by a consulting physician to be due to *cancer*."

The patient ultimately died of exhaustion, and at the post-mortem the gall-bladder was found quite choked up with gall-stones of various sizes, some being as large as garden peas. There was "not a single vestige of biliary secretion, even the gall-bladder itself being colourless. The duct was considerably enlarged at its hepatic extremity in consequence of the frequent passage of gall-stones through its calibre. The liver was rather diminutive in size, but not changed materially in structure or colour."

SALICIN IN DIARRHŒA.

The July number of the *Detroit Rev.* opens with an article by Dr. J. C. Bishop on the "Comparative Value of Opium and Salicin in Diarrhœa and Dysentery." In a great number of cases Dr. B. has had the best effects from salicin after a total failure of opium, and he gives some cases of other medical men in confirmation of his own. He sums up with the expression of his belief that salicin, as a remedy in intestinal cases, is preferable to opium, for the following reasons:—"1st. Salicin is perfectly harmless, even when administered to very young children; opium is not so. 2nd. Salicin increases the appetite and promotes digestion; opium destroys the former and retards the latter. 3rd. Salicin may be administered to the most delicate stomach without any ill sequences, while opium is absolutely contraindicated in many persons, who possess a peculiar susceptibility to its action. 4th. Salicin has no appreciable effect upon the brain, while opium induces a hyperæmia of that organ. 5th. Salicin possesses valuable antiseptic properties, while opium, if it possesses any, does so in a very feeble degree. 6th. Salicin is an antiperiodic, while opium has no notable effects in that direction. 7th. Salicin prevents the putrefactive changes in the contents of the bowel; opium does not."

SANTONINE.

Prof. Franerschi Giovanni asserts that if santonine is exposed to the light so as to allow it to become yellow before taking it, it then produces none of the peculiar colour-actions of santonine upon the organ of vision.

The professor disbelieves in an elective action of santonine for the optic nerves, and attributes the peculiar action of santonine on the vision to the change of colour in the santonine taking place within the body. He maintains that santonine only colours the humours of the eye, and acts in no other way on the field of vision, and that this change only occurs because santonine becomes yellow under the influence of light. Since santonine finds light in no other part of the body except the eye, the change takes place in that organ. Hence, when yellow santonine is given, no action is produced on vision, because the light can have no further action upon the santonine. For the same reason, rhubarb, madder, and other colouring agents do not affect vision when taken internally, because they are coloured already.

ON REPAIR AFTER FRACTURE.

Prof. Agnew, of Philadelphia, has arrived at the following conclusions on this subject:—

1. That there is no evidence founded on structure, that the process of healing in the fractures of man may not be studied by experiments on lower animals, or that the repair in the latter materially differs from that in the former.

2. That the reparative act is the result of an inflammatory process.

3. That the reparative material is furnished by the vessels of the periosteum, endosteum, bone, and to some extent from those of the adjacent soft parts.

4. That the uniting material is deposited external to

the bone, constituting an ensheathing callus in the medullary canal; when there is no displacement, between the ends of the bones, the conversion of this preliminary substance into bone proceeds from the surface towards the centre, so that the exterior is hard long before the interior, which will account for the movement discoverable in specimens apparently solidly united together.

5. That the union of bone is through cartilage, and even cells which have not reached the typical form of cartilage, and in this respect does not materially differ from the process observed in the primary development of bone.

6. That the presence of the ensheathing and medullary callus, which Mr. Paget regards as exceptional in man, should be considered the rule.

7. That the terms *temporary, or provisional* callus, as used by Dupuytren, in contradistinction to the *definitive*, must be accepted with considerable limitation, the one not differing in any particular of composition from the other; that the delay in the production and bony transformation of the intermediate or definitive callus, as compared with the exterior and interior portions, is only due to the comparatively small vascularity of the compact part of the bone.

8. That complete absorption of the ensheathing callus never entirely disappears, and that the reabsorption of the medullary callus is not a work of nature set in operation because the union at the ends of the bone has become complete, but simply a repetition of the order followed in the development of the long bones, entirely independent of the fracture, a work which contributes both to their lightness and mechanical strength.

ERGOT IN DIABETES INSIPIDUS.

Dr. Da Costa has communicated to the Philadelphia College of Physicians a case of diabetes insipidus in which he believes that a cure was effected by ergot in about six weeks. It was given at first hypodermically, but caused so much local disturbance that the fluid extract was given by the stomach three times daily in drachm doses, increased after ten days to two drachms.

THE ABSORBENT POWER OF THE SKIN.

Dr. von Wolkenstein, of St. Petersburgh, has made 100 experiments upon frogs and other animals, from which he concludes that weak watery solutions will penetrate the skin, but that strong solutions will not; that the absorbent power of the skin increases in direct proportion with the elevation of the temperature of the fluid; and that the skin of young animals absorbs more rapidly than that of older ones. He employed 1 per cent. solutions of iodide of potassium, perchloride of iron, and other substances.

ERGOT IN UTERINE FIBROIDS.

Prof. Byford read a paper at the late meeting of the American Medical Association in which he expressed the opinion that ergot will really cure these tumours. He has collected from journals and correspondents 103 cases, of which 23 are reported to be cured; in 38 the tumours were diminished in size and the hæmorrhage and other disagreeable symptoms removed; in 19 the hæmorrhage, &c., was relieved, but the tumours unaffected; only 21 entirely resisted treatment. This shows decidedly favourable results in 82 cases, and the favourable effects of the treatment may be further appreciated from the fact that in 21 cases it was suspended, though in some of these the patients were much benefited.

TUBERCULAR OTITIS.

M. de la Bellière has published a careful study of the subject of otitis in phthisical patients. He concludes that this affection is simply catarrhal, and that osseous lesions are only the consequences of ulceration of the mucous membrane. He thinks further that it most frequently originates by propagation along the Eustachian tube of the catarrh of the pharynx or the granular sore-throat so frequently met with among consumptives. He concludes that true tubercular otitis does not exist, or at least that it is excessively rare.

BILIARY CALCULI ESCAPING BY THE ABDOMINAL WALLS.

M. Brousson, of Nimes, relates the case of a patient with a painful tumour between the spine of the ilium and the umbilicus. It was supposed to be an abscess, and was opened with Vienna paste. Forty biliary calculi were removed from it, and three months after the patient was well.

COAGULATION OF THE BLOOD.

M. Glenard communicates to the Academy of Sciences his views on this subject. He says that if a portion of an artery or vein filled with blood be cut out from a living animal the blood contained in the removed segment will not coagulate, but will dry with the vessel containing it, and will form a pulverulent mass which is soluble in water. This solution is capable of coagulation. M. Glénard considers coagulation as the death of the blood, and as due to contact with foreign bodies, such as the basin into which it is drawn. So long as the blood has not been coagulated it preserves its properties, and he adds that blood preserved in a vascular segment may be used for transfusion seven hours after its removal from the animal.

ACTION OF PERCHLORIDE OF IRON.

Dr. A. Jacobi, writing in the *American Journal of Obstetrics* on diphtheria, presents the following facts respecting the action of perchloride of iron:—

While there are many astringents, the coagulum of each differs from all the others. Thus, tannin produced a cloudy, diffused coagulum; carbolic acid, a diffused coagulum, but only after half a minute; alum, a tenacious clot that sank to the bottom of the test-tube without increasing in size; three drops of creasote instantaneously formed three dense curds, each of which sank separately, increasing in size like a rolling snow-ball; perchloride of iron gave a layer of coagulum, a few lines in thickness, that sank very slowly, leaving a fluid clear above it.

When subcutaneous veins were exposed on a living rabbit, and touched with a drop of perchloride, no visible effect was produced for over a minute, then they were seen to markedly diminish in calibre, while a drop of creasote formed a coagulum which instantly obliterated the vein by compression. The second effect was mechanical—the first, through exciting the vital contractility of the blood-vessel.

From these facts, it seems probable that one of the ways in which perchloride of iron modifies diseased mucous membrane is by *re-awakening* the *contractility* of the *paralysed blood-vessels*.

Concerning the action of this iron salt, after its entrance into the blood, the following suggestions are offered:—

1. There is reason to believe that it is absorbed as muriate of iron, without decomposition.

2. If injection of perchloride into the veins of animals be very slowly performed, only very minute precipitates are formed and taken up by the white blood corpuscles existing in great abundance in them.

3. To a certain extent the perchloride of iron can supply the place of the blood corpuscles, as oxidiser of the tissues.

4. The perchloride of iron is especially distinguished by its capacity for stimulating the nervous system, probably by increasing the arterial tension in the nerve centres,

JOTTINGS FROM JOURNALS.

Thrush.—Dr. Girard, of Marseilles, earnestly urges the importance of cleanliness, air, exercise, food, and suitable clothing in the treatment of thrush (*muguet*). Locally, he applies 3 or 4 times per day, with a camel's hair pencil—

Alum, 5 grammes ;
Glycerine, 30 grammes ;

otherwise

Borax, 10 grammes ;
Glycerine, 30 grammes.

—*La France Médicale.*

Paris.—Maxime du Camp's great work on Paris, in 6 volumes, is now complete. It is calculated to interest the physician, the moralist, and statesman, but above all the physician, alike. M. du Camp adverts to the rapid decrease of the Paris population. During the siege two millions and upwards of people were exposed to famine and every wretchedness. In the one month of January almost 20,000 persons perished. During the same period there were about 2,500 births. In France, taking the population generally, it requires, as Dr. Bertillon has shown, almost 200 years to double the population, whereas in England the population doubles in about a quarter of that period, or say 50 years. In 1872, the total mortality of Paris was 45,780, of which 15,000, a frightful proportion, perished of maladies of the respiratory organs. Really, every medical man should endeavour to glance over Du Camp's important history. The topics of which he treats concern not only Paris, but London, and in fact, our entire race.

Anatomical Preparations.—Professor Marini, of Naples, has succeeded to a singular extent in the preparation of animal remains. The Egyptians, Clot Bey was of opinion, had recourse to embalming from sanitary motives, and it is at any rate remarkable that so long as this procedure lasted the plague was unknown. Professor Marini follows three methods : the first is the ancient Egyptian procedure, in the second the tissue becomes hardened, but not to so great an extent as in the third, wherein the tissues appear to assume a stony consistence. The human frame, in whole or in part, can be preserved apparently quite fresh, and a foot which was prepared in 1864 has been brought to and remained ever since in Paris without visible change. The general mummification of the remains of the dead cannot be desirable, but for preparations and dissecting purposes, it would seem excellent. Professor Marini keeps his procedures, it is to be regretted, a secret; but by the aid of chemical analysis one might at least learn the nature of the chemical agents to which he has recourse.—*Gazette Médicale de l'Algerie.*

Whooping-cough. — The advantage accruing from changed air in whooping-cough is so unquestionable that, when practicable, the procedure should always be had recourse to. Meanwhile, it is interesting to learn that M. Greslon has found chloral of real efficacy. The little patient, a boy of eight years old, suffered from whooping-cough, of six weeks' duration, most severely. The fits were most characteristic, excessively frequent, as well as attended with vomiting and distressing turns of suffocation. Opiates, antispasmodics and what not, were tried in vain. At last it occurred to Dr. Greslon to have recourse to chloral, in from one to two gramme doses, nightly. The whooping, which had recurred every hour, after four days took place only five or six times daily. In ten days they were only half as frequent, and greatly less severe in character. In short, the patient became rapidly exempt from his complaint, regaining his habitual gaiety and spirits.—*La France Médicale.*

Paralysis of the Cervical Branch of the Sympathetic.—M. Nicati, pupil of Professor Horner, of Zurich, has arrived at the conclusion that paralysis of the sympathetic is commoner than what is imagined, and that ephidrosis or hyperidrosis, so named, is no other than paralysis of the sympathetic nerve.—*Archives Médicales Belges.*

Pott's Disease.—Pott's disease, *ostéite caséeuse du corps des vertebres*, as M. Charcot, of the Salpetrière, is pleased to term it, is no other, as Dr. MacCormac has shown, than tubercular infiltration of the bodies of the vertebræ. In other respects, it is quite certain that this infiltration is productive of local abscesses, with inflammation of the local meninges, tumours which compress and in fact strangulate the spinal marrow. The result is paraplegia of the lower extremities. Dr. MacCormac in such cases advises renewed air and plenty of it, with generous diet. M. Charcot, on the other hand, has recourse to local cauterisation. Forty years ago the wards of the Salpetrière reeked with the odours of the scorched tissues of the sufferers undergoing this terrible remedy. Time seems to have realised little general amendment in the treatment. Nevertheless, more rational views must necessarily become current, leading to prevention, here vastly better than cure, one day.—*Gazette Médicale de Paris.*

Ozæna.—A cure of this most distressing affection in a case of thirteen years' duration is recorded in the *Giornale della Accademia Medica di Torino,* one in which the nitrate of silver and the permanganate of potash had been resorted to in vain. The successful means consisted in frequent injections of the chlorate of potash in the proportion of one part of the chlorate of potash in six parts of water. The cure proved permanent.

Nettlerash.—Every practitioner knows how troublesome, and indeed painful, nettlerash occasionally proves. The subject of the case, himself a medical man, being seized with severe urticaria, had the happy idea of bathing the feet and legs in hot water well dosed with mustard. Hardly had he dipped his extremities in the bucket when, vastly to his satisfaction, every discomfort disappeared.—*Tribune Médicale.*

Hydatid Cysts opening into the Spinal Cavity.—A very singular case of this description was recently laid before the Société Biologique by MM. Lionville and Strauss. It occurred in the service of M. Béhier, of the Hotel-Dieu. The subject was a man aged 52, who was admitted into hospital in the month of June, complaining of paraplegia with formication in the lower extremities. Intro-rhachidian hæmorrhage, or softening of the spinal marrow, was the presumptive diagnosis. The symptoms of compression grew more and more decided daily, large eschars formed over the sacrum, with constipation, and inability to pass water, and finally, the patient sank in the month of January. On examination, it was discovered that a hydatid cyst had formed in the spinal marrow on a level with the 9th and 10th dorsal vertebræ, while at the same time a vast collection of hydatids subsisted between the left lung and the diaphragm.—*Gazette des Hopitaux.*

Death as occasioned by Musical Excitement.—A stout married countrywoman, some 28 years old, went to a festival where, for the first time in her life, says the *Repertorio del Piemonte,* she heard a powerful orchestra. The festival lasted three days, and she danced with much satisfaction during its whole continuance. When all was over she returned home, but the music, at least subjectively, returned with her. Do what she would, day and night and always, the music sounded in her ears. Nightly sweating and diarrhœa ensued. Medical interference proved fruitless, and at the end of six weeks, during all which protracted period the imaginary orchestra never ceased for one minute, quite exhausted, the poor creature at length expired.

Hemiplegia.—M. Larrey laid before the Académie des Sciences the details of three cases of the morbid results consequent on being struck by lightning. In connection with this subject a very interesting instance has been published in the *Berliner Klinische Wochenscrift* by Professor Eulenburg. The subject was a man of 42 years of age, pointsman on a railway. One day when adjusting, as he was in the habit of doing, an electric clock, a flash of lightning, conducted by the telegraphic wire, struck him on the left side. He fell immediately senseless, and only regained consciousness an hour afterwards upon being drenched by a heavy shower of rain. He tried to rise, but found himself completely paralysed on the left side. He succeeded, however, in dragging himself home. Next morning he was visited by a medical man. Under the influence of local faradisation some improvement ensued in the condition of the leg, but the arm remained quite motionless. Ten months after the occurrence the man consulted Dr. Eulenburg. The arm was still paralysed, except that the patient could move the fingers a little, and oppose the thumb. The left side of the face was affected, the eyelids trembled, and, loss of memory excepted, the intelligence was not affected. During two months faradisation of the periphery, with galvanisation of the brachial plexus and nerves, one and the other, were alternately followed up. This treatment was now discontinued for a time, then resumed again with marked success. The patient could raise, flex, and extend the left arm; supination and pronation of the forearm were, however, imperfect, owing to paralysis of the pectoralis major muscle. Sensation, temperature, and nutrition had otherwise all become normal.—*La France Médicale.*

Fœticide.—It cannot be too generally known that there is such a crime as unborn-infant murder. The child is destroyed ere it sees the light. This crime is not unknown in England, in Europe. It has extended to America, not only to the States, but to Canada also. It has been heard of in moral, in this instance most immoral, New England. In the London papers advertisements, very carefully worded it is true, but of which the, at least occasionally, dread import is but too obvious, from time to time appear, in which it is stated that ladies in a certain condition, in other words pregnant women, can obtain lodging and attendance in such and such localities. The late coroner for London affirmed that some one thousand dead infants were yearly discovered in or about London. How many of these were the fruits of criminal abortion the Almighty only knows! Dead infants are found in first-class railway stations, on the roads, at people's doors. The writer of these lines once found a dead newly-born, and too probably criminally aborted, infant, himself. Dr. Alfred Andrews, of Winsor, Ontario, recently read a paper before the Western and St. Clair Medical Association. This paper is entitled "Abortion." It is published in the *Canada Lancet.* He says that in Winsor he attended in consultation four cases of abortion which, he has a moral certainty, were felonious. He declares that he has had *hundreds of what may be well styled infamous applications.* The crime of fœticide, he affirms, "*is fearfully prevalent, corrupting and debasing the country both morally and physically.*" Let us only hope there is some exaggeration here. In any case let the entire medical profession, if needful, raise their voices, and proclaim felonious fœticide as an outrage against God and Nature, one to be opposed by every means which medical concert and the laws of the community have placed at their disposal.—*The Canada Lancet.*

Renal Calculus followed by Death.—The subject was a lady aged about 60, and the practitioner in whose hands the case was lodged was Dr. Secondo Mancini. Divested of detail, the renal apertures of both ureters (*imboccatura del rispettivo uretere*) were found closed severally by a uric acid calculus, which, however, had not penetrated into either ureter. The pelvis of each kidney was found slightly dilated by a trifling amount of urine. The parts in other respects were sound. Coma and other symptoms of ischuria renalis, as owing to the obstructions thus created to the urinary discharge, brought life to a close.—*Lo Sperimentale,* Firenze, Roma.

Pneumonia as complicating Periodic Fever.—A paper on this subject, entitled "Poche osservazioni sulla pulmonite miasmatica palustre," by Dr. Vitantonio Giampietro, also appears in the preceding journal. Fortunately, in these islands, owing to the progress of drainage and a milder climate, we have comparatively few opportunities for the direct observation of marsh fever attended with local complications; but in certain parts of Italy, the Black Sea mouth of the Danube, Algiers, the coast of Africa, and tropical America, the East and West Indies, marsh fever, with cerebral, pulmonary, and other complications, is anything but infrequent. In four of Dr. Giampietro's cases there was actually double pneumonia. The type of fever was quotidian in three, tertian in six of the cases. The fever in general yielded to sulphate of quinine, when given in large and early doses. In two of the cases, however, the quinine was tardily administered (l'amministrazione fu tarda), and the patients perished with the usual symptoms of pernicious intermittent pneumonia.

Pnigmos.—A case of pnigmos, or suffocation (πνιγμὸς), is related in a Dutch journal—*De Werkmansvriend*—as having occurred on board the steamship *Koning der Nederlanden*, while moored in the Helder. The child was lying at the moment sick in the cabin (*dat ziek te kooi laq*), and had been overlooked in the confusion. The conflagration was subdued, but the child was found dead. Such occurrences strike the attention forcibly, but hardly anything is said, although appealing equally to reason and reflection, in regard of the multitudinous instances of tardy yet sure destruction which ensue when adults and children, but infants in special, are condemned for long consecutive hours and days to breathe air wholly unfitted for wholesome respiration.

Sciatica treated by Electricity.—Out of seventy-three cases of sciatica, many of which had previously undergone various treatment, Dr. Berger procured permanent relief in sixty-three by means of electricity. The moistened positive pole was applied to the dorsal vertebra, while the negative was passed over the affected locality for from three to eight minutes or so. At the same time Dr. Berger exhibited croton-chloral at bed-time so as to ensure sleep.—*Allgemeine Med. Cent. Zeitung.*

Purulent Pleurisy.—The writer of these remarks saw Dupuytren one morning, at the Hotel-Dieu, plunge a trocar and canula into one of the intercostal spaces and withdraw half a basin of pus from the cavity of the pleura. At the Société Médicale des Hôpitaux, M. Libermann exhibited a case the subject of which had laboured under purulent pneumonia of the right side. The patient, who was convalescent, had been operated upon ten months previously, and worn a canula inserted o.m. 07 for seven months.—*La France Médicale.*

Malignant Anthrax.—Malignant anthrax as occurring in man has hitherto proved always fatal. A number of most interesting cases of this affection are related by Foderé in his "Médecine Legale." Dr. Raimbert, of Chateaudun, recently laid before the Académie de Médecine a case of what he considers malignant anthrax successfully treated in a man by means of subcutaneous injections, seven in all, composed of 8 drops in each injection of an iodised solution of iodine (*iode ioduré*), in the proportion of 1 drop of the solution in 4000 of water, afterwards increased to 15 drops, 1 drop in 500 of vehicle.

The treatment had been preceded by trials on the lower animals. On the eighth day of treatment the patient was considered out of danger. The case was witnessed by Drs. Staniz, Cézard, Collot, and Jailliot, physicians of the country well acquainted with malignant carbuncle (*charbon, œdème malin*), and should subsequent experience confirm the diagnosis, it would prove a great gain for humanity, as well as for the portion of the brute creation liable to be affected.—*La Tribune Médicale.*

TOPICS OF THE TIME.

PATHOLOGY OF DIGESTION.

M. LEVEN, who has investigated with much patience various problems involved in the digestion of food, has drawn from his experiments some practical conclusions which deserve the attention of all practitioners. He says that in order to ascertain the digestibility of a food, we must find out not only what is its aptitude to undergo the action of the digestive juices, but also what effect the food produces on the mucous membrane.

We must know in what part of the digestive tube the food is elaborated, whether in the stomach or in the intestine. Thus, meat stays a long time in the stomach and milk a very short time. So that, if we have to treat an ulcer in the stomach, we can easily understand how important it is not to give meat, which excites the contraction of the muscular fibres of the stomach, and the circulation of the mucous membrane, in order to avoid returns of hæmatemesis.

Milk, on the contrary, will be preferred; it is an inert substance, which leaves the stomach to repose, and glides softly through the pylorus without any effort of the organ. It has been said in such cases that milk is more digestible than meat; but are we authorised to make this statement? No one has measured the time necessary for milk to pass into the circulation. How many hours does it take to emulsionise fat, and to render caseine absorbable? Does milk pass into the blood quicker than meat? That is probable; but we cannot, and ought not, to establish any comparison between the digestibility of these two substances. It does not take place on the same spot, and we have to do with perfectly different substances, between which we ought to make no comparison. Milk, we have said, leaves the stomach at rest; meat, on the contrary, keeps it in a necessary condition of excitation, which is useful with regard to digestion in general. If we prolong feeding on milk diet, we bring on a condition of weakness and apathy of the stomach, and it will easily be deranged by the slightest change of diet.

Meat, on the contrary, keeps up the activity of the stomach, comforts it, and in a general way facilitates the digestion. It is thus that, without considering substances with respect to their digestibility, it is important to know in what conditions their digestion takes place, in order that we may lay down the indications for hygiene and clinical practice.

The aptitude to undergo the action of the digestive fluids. that is, the digestibility, depends in an absolute manner on the chemical composition of the food. It varies, however, in many conditions; it varies with the quantity of the food, its culinary preparation, &c. A very digestible substance becomes indigestible if taken in too great quantity. A substance is more or less easy of digestion according as it has undergone for a shorter or longer time the action of the fire.

It is clear that the fibres of meat are more easily dissociated in the stomach, and that it is more easily reduced into chyme, when it has been long exposed to the fire. Old people know this well, and it is not only because mastication has become painful that they prefer well-done meat. Raw meat, which, according to some physicians, is more easily digested than cooked meat, remains longer in the stomach; it keeps up better, it is true, the activity of the stomach; but M. Leven has many times verified by experiment that it is subject to a longer stay than meat well cooked: if, then, it be preferable for a young man, it is doubtful whether we should advise it for old persons so readily as is done.

The way of preparing the food equally modifies its digestibility. Thus, meat becomes an indigestible substance if seasoned with spices, and is then a cause of dyspepsia. This is observed daily in persons who frequently partake of stews. When a substance is indigestible, when its passage through the digestive tube does not take place without pain, is not the result of the digestion, when once it is accomplished, the same as when digestion has taken place without distress? Can disturbances in digestion alter the nature of substances when digested?—in other words, does meat undergo the same changes when there is dyspepsia? Does starch not become grape-sugar? It has been said that defective digestion introduces into the blood some products which are ill elaborated, and disturb the blood. Vulpian professed this idea last year, in 1874, at the Faculté de Médecine.

To advance such a fact the physiological condition of digestion must be forgotten. Can meat penetrate in any other form than that of peptone and starch but as sugar? If a dyspeptic introduced every day into his blood products of a bad nature, to what a degree of cachexia would he not arrive in fifteen or twenty years of his disease? And the majority of such persons are stout, and do not appear to suffer at all from the food they consume.

If they were poisoned by the bad products, the intestine would from time to time disembarrass the economy by means of diarrhœa. But the dyspeptic is, on the contrary, very constipated. Nothing, in a word, reveals bad nutrition, or alterations of the blood by bad matters. This is, then, pure hypothesis, which is contradicted by physiological experiments and clinical experience. We see, then, to how many different conditions the exact expression of the digestibility of a food is subject, and how much allowance must be made for the stay of the aliment in the stomach.

Since nothing precise has been able to be made out by this method of experimentation, it has been said that the mucous membrane of the stomach and intestines has no definite functional qualities, and that the problem of digestibility has its solution neither in the stomach nor in the intestines, and that it can only be judged of by the condition of the organism. The error evidently arises from this, that persons have desired to see, in a very complex phenomenon, one exceedingly simple. This has put the question wrong.

Blondlot has mistaken the autonomy of the stomach and of the intestine. It is certain that whilst their autonomy subsists, these organs are bound up, like all the rest, with the whole of the economy, by their circulation, by their innervation, and that all effects on the economy will react on them. But it is not the less true that they have their own proper impressionability, which is perfectly defined, and independent in this matter of the blood and other tissues, and their own part in the function of digestion.

To understand digestibility, it is in this new point of view that we must study foods. The error of Blondlot has been fatal to clinical medicine; it has imbued it with erroneous ideas, which have kept up medical empiricism.

PATHOLOGICAL ANATOMY OF PULMONARY EMPHYSEMA.

Dr. Cornil (*La France Médicale*, No. 19, 1875) says that it was for long believed that in pulmonary emphysema the alveoli had simply been enlarged; but now it is without dispute that it results from the atrophy of a certain number of alveolar walls, in consequence of which there are formed dilatations which are sometimes very considerable in emphysematous lungs. Microscopic examination, indeed, easily shows great emphysematous dilatations on the walls, traces of the elastic walls of the alveoli which are converted into a solitary dilatation.

When we examine sections of an emphysematous lung which has been blown up and dried, we are struck with the greatly increased diameter which the common cavity or pulmonary infundibulum presents. The walls of the alveoli which open into it are, on the contrary, brought nearer at their insertion to the periphery of the infundibulum. It is easy to see this, whether by this process or by cutting off with scissors thin pieces of the lung on a fresh piece, that the alveolar walls are often perforated. This is the first stage of the disease in which the infundibulum alone is dilated, and we find its central cavity enlarged and confounded with the alveolar cavities, the walls of which are more or less atrophied. When an emphysematous infundibulum is seated on a pleura, the absence of resistance of the neighbouring tissue permits of its dilating more; but the greatest of these dilatations or vesicles, which may attain the size of a hazel-nut or a walnut, are due to the communication of several infundibula with each other. This is the most advanced stage of the disease. In some emphysematous lungs, especially in old persons, at the apex and anterior edge of the upper lobes, the lung is converted into lacunæ communicating almost all with one another, so that on pressing on the point of the organ we make the air circulate in the interior in almost all directions.

The mechanism of the perforation of the walls has been variously interpreted. M. Villemin denies the existence of epithelium in the lungs, and asserts that the alveolar wall is composed of connective tissue, elastic tissue, and a vast number of blood capillaries. Between the meshes of the capillaries Villemin admits the existence of elements of connective tissue, characterised by nuclei surrounded by a small quantity of protoplasm. Owing to some unknown influence, these nuclei hypertrophy, become granular, and soon, in place of an element in life, we find a little heap of dead organic matter destroyed by fatty transformation. This matter, deprived of all vitality, is not slow to be destroyed, and leaves in its place perforations of the wall which making the two neighbouring alveoli, which before this were independent, communicate. This perforation is not unique: as a sequel of the same alteration, several perforations soon take place in the same wall; then the elastic fibres, which tend continually to contract, will cause tearing, and the vessels, deprived of their basis, atrophy, so that vascularisation is abolished or diminished.

An infundibulum thus transformed presents on its internal wall, in place of small walls separating the alveoli, simple reliefs formed by elastic fibres, the last vestiges of these walls. M. Villemin concludes from these facts that emphysema consists solely in a lesion of nutrition, and that the pressure of air on the walls is powerless to cause it. We find ourselves obliged not to be of the same opinion as our esteemed friend and brother in medicine, Dr. Villemin: firstly, the epithelial cells, which preparations made on dried lungs do not permit us to see, are made indubitable by preparations with nitrate of silver. Thus, if we cut off with scissors the thin wall of a mass of emphysema which projects into the pleural cavity, we see very well the pavement epithelium by impregnating its interior surface with a solution of nitrate of silver. These epithelial cells examined *in situ* on preparations not coloured by the nitrate of silver, often show fatty granules on their protoplasm around the nuclei, as Rindfleisch has shown.

The thinned walls present also in their interior and on their surface some ovoid heaps of fatty granulations arising from these elements, or perhaps from the elements of the capillary vessels, and it is probable that this granular degeneration has a great part in the little perforations of the cell membrane of the alveoli. It is certain that simple emphysema is characterised especially by lesions of nutrition of the lung; but nothing proves that repeated attacks of bronchitis, or heart disease, &c., may not be the initial cause of the lesions, and we have in croup, whooping-cough, and infantile broncho-pneumonia undoubted causes of emphysema. In such cases, in fact, the infundibula are dilated under the influence of the efforts in coughing and in expiration, and there results from these little air vacuoles, very easily seen on the surface of the lungs. These vacuoles, or emphysematous vesicles, are, whilst the process is acute, and whilst the bronchitis lasts, filled with mucus and muco-pus.

On the walls of the great dilatations of emphysema, and in the great majority of lungs which are emphysematous in old persons, we remark a rather intense colouring along the vessels. We have in vain sought for atheromatous changes of the vessels in these cases, which have been supposed rather than demonstrated by authors, with the desire of explaining the production of idiopathic emphysema. The wall of the cavity presents, when examined in its internal aspect, projections formed by bundles of elastic fibres belonging to the effaced alveoli, and which are now applied against the internal wall of the dilatation.

If the emphysema exist in a great extent of the lung or of one lobe, as the circulation is considerably diminished in the points thus injured, the diseased part is anæmic, whilst in the parts remaining healthy the tissue is red, œdematous, and gorged with blood. It is at the apex and anterior and inferior border of the lungs that emphysema shows itself by preference; it then causes projections, white or greyish, sometimes even globular appendices, which are vesicular and full of air. When far advanced, and when the disorders commence, which are met with in prolonged agony, we find at the level of the anterior edge of the two lungs pieces of pale red, sometimes white texture, consisting of a great number of small bladders, which are often rather voluminous. The diseased parts are soft and elastic to the touch, and give, when pressed between the fingers, the sensation of a down cushion.

When the greater part of the lung is altered, the organ is hypertrophied; it fills the pleural cavity, does not fall in when that cavity is opened, and it may depress the liver or displace the heart.

Emphysema may be the cause of a pneumothorax by the rupture of a vesicular dilatation, interlobular emphysema may propagate itself to the mediastinum, to the neck or subcutaneous cellular tissue, which is sometimes noticed in children. Lastly, emphysema, when interlobular and due to the penetration of air in the cellular tissue under the pleura after rupture of the neighbouring alveoli, gives to the visceral pleura the aspect of a membrane raised by froth. These vesicles are easily displaced by pressure, and then move about under the pleura, characters which differentiate this species.

The most common cause of emphysema is asthma, whooping-cough, and in general all diseases of the chest accompanied by cough and violent expiratory efforts. The majority of authors admit its production during expiration; and emphysema coincides almost constantly with senile atrophy of the lung.

ABOUT BOOKS.

Note-Book of Materia Medica, Pharmacology, and Therapeutics. By R. E. Scoresby-Jackson, M.D., F.R.S.E., &c., &c., &c. Third Edition, revised, enlarged, and brought down to the present date, by Dr. Angus Macdonald, M.A., F.R.S.E., Fellow of, and Examiner in Chemistry to, the Royal College of Physicians; formerly Lecturer on Materia Medica and Therapeutics, Surgeons' Hall, Edinburgh. Edinburgh: Maclachlan and Stewart. 1875.

There is no dearth of text-books on materia medica, and yet we are by no means sure that the subject is as well represented as it ought to be in works of this kind. Most of them possess very evident defects, and some of them are quite misleading. Some, however, are very superior. The late Dr. Scoresby-Jackson, who modestly called his work a note-book, produced one of the most comprehensive text-books on the subject, and one which stands out as one of the best, if not the very best, in the English language. It is both accurate and succinct. By a careful arrangement, and the use of a great variety of types, the author has been able to condense into a moderate compass all the main facts of importance to the student, and, at the same time, render his book one of the most useful to practitioners.

Part I. is termed Introductory, and in this the author takes a general view of the subject of materia medica, the sources and natural condition of medicines, the pharmaceutical and other operations they undergo, their *modus operandi*, their classification, the means by which they are introduced into the system, the circumstances which modify their action, and the art of prescribing them. This part occupies 102 pages, which, condensed as they are, are really easy reading.

Part II. is devoted to the Inorganic, and Part III. to Organic, Materia Medica. Here may be found, in an arrangement at once simple and practical, the various groups of medicinal substances in common use—officinal and non-officinal—with a condensed account of their source, preparations, uses, doses, and mode of administration.

To analyse the book with any effect we should have to quote many pages. We must therefore content ourselves with saying that we have always regarded Dr. Jackson's work as our favourite text-book, and that the editor has added to the present edition an account of all the new preparations contained in the Additions to the British Pharmacopœia; and, further, that he has made such alterations as the progress of materia medica and therapeutics rendered necessary. The work may therefore be consulted with confidence by both students and practitioners. We may add that the index is very copious, and in it a column is devoted to the doses of the several medicines. The getting up of the work is all that can be desired, and reflects considerable credit on the publishers; we are glad to say that the edges are cut. When will all publishers adopt this excellent practice?

Lessons on Prescriptions and the Art of Prescribing. By W. Handsel Griffiths, Ph.D., L.R.C.P.E., Professor of Chemistry in the Ledwich School of Medicine, Dublin, &c., &c. London: Macmillan and Co. 1875.

If students were more generally aware how many wreck their hopes at every examining board by their inability to write a prescription this book would be received by them with enthusiasm. It contains ample directions to enable any student to write a prescription correctly, and, if the author's directions be carefully followed, the prescriptions of those who make him their guide will be above the average.

The first lesson is devoted to grammatical construction; the second to the parts of a prescription, which are enumerated after the time-honoured fashion; the third enumerates the signs and symbols employed; and in the fourth there is a copious list of the Latin words and phrases in common use, with their meanings and the contractions by which they are frequently expressed. In the fifth lesson Dr. Griffiths enters upon the principles of medicinal combination, giving the pith of the elaborate instructions published by the late Dr. Paris in his "Pharmacologia." Incompatibility is the subject of the next lesson, which contains all that the student need learn on the subject. The seventh lesson is devoted to posology, and here we are glad to observe that Dr. G. points out some of the errors in the British Pharmacopœia. For our own part, we have always regarded it as a great mistake for the compilers of the National Codex to have inserted doses in the manner they have done. In every case the information given is too meagre, and as much may be said for all the tables of doses published in the various text-books. Doses are altogether relative, and differ greatly, according to whether they are to be repeated or not, and if so, at what interval. Dr. Griffiths, both in this volume and in the "Posological Tables" he has published separately, has contributed a good deal to the subject; but we believe that there still remains much to be done.

The remainder of the work is devoted to the varieties of magistral formulæ, with examples and exercises in their construction. We strongly advise students to go carefully through these. The book forms a neat pocket volume, which every student should "read, mark, learn, and inwardly digest."

Health in India for British Women. By Edward John Tilt, M.D. London: J. and A. Churchill. Fourth edition. 1875.

When a book arrives at the fourth edition we may well believe that it has passed all reach of criticism for or against it, and supplies a want. Our author's work has evidently been much read by those who take an interest in the Anglo-Indian community. Dr. Tilt believes that we can conquer India, but we must finally succumb to its climate, and that we can take little or no root there as in North America and Australia. "Every additional year spent in India increases our liability to its diseases without lessening their fatality. As far as women are concerned, the various processes of the reproductive organs are less perfectly performed; children must be sent home, or grow up sickly in mind and body."

Dr. Tilt very correctly remarks that if our fellow-countrymen and women could be induced to so modify national habits as to eat and drink less (especially brandy) when in India than at home it would take the sting out of the tropical climate. People just arrived in India are usually in a state of plethora (page 31).

Our author states that puerperal hæmorrhage is very common after parturition in India, and to avoid which ladies often return to England to be there confined. Tetanus is likewise an occasional attendant on parturition, and miscarriages. The last-mentioned complaint is much more frequently observed in Bombay. Uterine disease in India is thought to be in a great measure due to the inability to nurse in that climate, as the act of suckling promotes the return of the womb to its normal size.

The book contains much valuable information that will well repay perusal, especially by those about to proceed to India.

Medical Politics. Being the Essay to which was awarded the Carmichael Prize. By Isaac Ashe, M.D., &c. Dublin: Fannin and Co. 1875.

The essay of which the above heading indicates the nature was awarded the first Carmichael Prize of £200 by the Council of the Royal College of Surgeons, Ireland, in 1873. Its author had, we believe, in 1868, carried off the second Carmichael Prize of £100. Although we do not agree in everything stated by the author, still many really valuable suggestions are contained throughout the work, and which we would be glad to see carried out. As regards the moral capacities of the members of our "godlike" profession, we fully believe with our author that in none other is there to be found more self-sacrifice, more calm courage in the midst of constant danger, more earnest and incessant labour, more bowing down of the head and heart and soul in care and anxiety for others. "Every element or condition that tends to ennoble the moral faculties of man, to refine his feelings, to deepen his sympathies, to kindle his charity, to augment his self-abnegation, and increase his care for others, is to be found in the daily work of the physician, just as much as every element or condition that can elevate and train his intellectual faculties is to be found in his daily studies."

Dr. Ashe believes that the sending members of the medical profession to Parliament is a move in the right direction, and which will eventually tend to place the profession more surely and securely in its proper relative position in the world. We agree with the Doctor that many members of our profession are eminently fitted in all respects to hold legislative positions, and would prove invaluable in the debates upon such subjects as sanitary wants and various other scientific affairs. Dr. Ashe is very severe, and justly so, on the advice gratis system; we quote his own words: "It is the bane of the profession, from the highest to the lowest, and from all points of view. It lowers the estimate formed by the public of the particular individual in his own district. It drives the more highly educated physician, the gentleman who will not lower his status to the practice of a trade, from the country district to the town, because such a one cannot obtain a sufficient practice to the country against the shopkeeping practitioner." Dr. Ashe thinks that the advice should be charged for in all such cases, and the medicines *given gratis*, which would do away with several popular ideas on medical practice held by the public, chiefly the lower classes.

Dr. Ashe enters largely and fully into the question of the admission of women into our ranks, and deals fairly with the question. He thinks many young ladies might be taught to compound and become chemists, whilst others might, after passing certain examinations and studies, not, however, in mixed classes, be allowed to practise in midwifery and diseases of women. We recommend this part of his work to such as take an interest in this question, and believe that much valuable information will be derived from the perusal thereof.

In conclusion, we congratulate the author on his *brochure*, and if one-third of the ideas contained in it could be carried out during the next ten years it would be a bright era for the profession.

Des Propriétés Physiologiques du Bromure de Camphre (*Camphre Monobromé de Wurtz*) *et de ses Usages Thérapeutiques.* Par Louis Pathault, Docteur en Médecine de la Faculté de Paris. Paris: Adrien Delahaye. 1875.

This little *brochure* contains a careful *résumé* of the investigations that have been made respecting bromated camphor, or camphor bromide, since it was first introduced as a medicinal agent by M. Deneffe, as reported in the *Presse Médicale Belge*, and immediately afterwards referred to in The Doctor, which was therefore the first journal to introduce it to English readers. The author also contributes some experiments of his own, which, for the most part, confirm those of previous observers. The physiological effects of the drug are to diminish the frequency of the respiration and of the pulse, and in a very remarkable degree to decrease the temperature. Indeed, it may well be that the poisonous dose destroys life by this reduction of temperature, for artificial heat sometimes suffices to save the life of the animal. M. Pathault has studied the mode of elimination upon himself. He detected the presence of bromine in the urine passed from four to six hours after taking a dose, and the quantity increased during the succeeding nine hours; it then gradually diminished during forty-eight hours, after which it could not be detected. On the nervous system the drug acts as a hypnotic, and in some cases convulsions and muscular tremors have been observed. Therapeutically, it has been employed in delirium tremens, insomnia, neuralgia, chorea, hysteria, and epilepsy—in some of these diseases with considerable advantage.

Dr. Sawyer has sent us an *Abstract of a Clinical Lecture on Phthisical Laryngitis*, which he has reprinted from the *Lancet*, though we hardly know why, since he tells us that concerning the pathology of the disease he has "very little to say," and he might have added as much as to its diagnosis and treatment. He professes to base his account upon his own clinical experience, which, we observe, does not differ in any degree from that of the authors to whom he expresses his indebtedness. As a clinical lecture this may be very well; but we cannot see what should have led Dr. Sawyer to reprint it.

We have also received a sixpenny pamphlet on *Baldness: its Cause and Cure*, by Michel Carlin (Manchester, John Heywood). It contains thirty-two pages, of which scarcely two refer to baldness, the remainder being a plea for vegetarianism. The writer recommends a very limited diet—about half or one-third of the amount usually taken—and only two meals daily, the excuse for the last recommendation being that the stomach requires rest between its digestive efforts. No doubt there are plenty of people who eat too much and too often, and there are some who consume too much meat; but this plea for vegetarianism as a cure for baldness is about as philosophical as the assertion that the disease proceeds from "eating more food than nature requires." The adoption of such a limited diet without medical advice would often lead to serious injury. Fortunately, Mr. Carlin's advice is not likely to be followed by many. We presume he is not a medical man, or his physiology would not be so antiquated.

INDEPENDENT DEPARTMENT.

M. FOURNIER ON TERTIARY SYPHILIS.

M. Fournier has devoted a clinical lecture at the Lourcine to the diagnosis of tertiary syphilis of the uterus, &c. The following abridged translation will be found full of important facts:—

Syphilitic tertiary affections may be implanted on the neck of the uterus, and even there they are not rare. Now, these lesions are exposed to being mistaken more on the cervix than elsewhere, and confounded with accidents of quite another nature. The proof of this is that up to this day tertiary lesions of the cervix have not been specially described, and that they are not even indicated in the most recent classical treatises.

It will, then, not be uninteresting to insist on the diagnosis of this order of lesions. Let us see with what accidents they may be especially confounded, and let us seek how it is possible to distinguish them from these.

I. *Mucous Metritis.*—In the first place there are here to be considered inflammatory ulcerations of the os uteri, resulting from what has been called mucous metritis, common lesions, generally spoken of as catarrhal ulcers or granulations, &c.

There is no doubt that in the majority, the great majority of cases, ulcerated syphilitic affections of the cervix are confounded with those ulcerations which are simply inflammatory, very variable in extent besides, as well as in aspect, in physiognomy, and which yet are ill-defined in their characters. Yet, when we descend to details, we see that these syphilitic ulcerations present certain characters which are not presented by inflammatory ulcerations, or reciprocally, and that, thanks to these characters, they may often (I don't say always) be distinguished from them with certainty.

Thus, 1. Ulcerated syphilitic affections are generally more hollowed out, notably more so than inflammatory ulcers are, the which, indeed, consist very often in erosions rather than in true ulcerations.

2. They are less granular, smoother, and flatter at the base.

3. Their edges are better marked, higher, more sharply cut, in a word, whilst the inflammatory erosions are almost on a level with the healthy tissues of the cervix.

4. They have sometimes a contour composed of segments of circles, which is never remarked in inflammatory ulcerations.

5. They irradiate from the orifice of the neck less regularly than inflammatory ulcerations, which radiate generally from this point in an excentric and regular way.

6. They are not accompanied, as the inflammatory ulcerations are in many cases, by swelling of the cervix, uterine hypertrophy, morbid sensibility of the organ, and neuralgic peri-uterine pains, by menstrual disorders, or hæmorrhages. In a word, whilst inflammatory ulcerations of the cervix are most commonly *ulcerations on a uterus already diseased* to a certain degree, the ulcerated syphilitic affections are, on the contrary, ulcerations on a healthy uterus, save in extraordinary coincidences.

7. They are, lastly, much more easily resolved than

the ulcers originating from metritis. These latter are in general obstinate, and obstinate because they are but a symptom of a uterine disease; whilst ulcerated syphilitic symptoms, on the contrary, which affect the uterus, are cured generally rather easily and quickly by the influence of the slightest care, such as touching with nitrate of silver, dressings, &c.

These considerations, joined to the notion of the antecedents, or still better, to the presence of ulcerated syphilitic affections on the vulva, often clear up the diagnosis in a very precise way. Should these prove insufficient, and this takes place only too frequently, they at least permit, if not to affirm, at least to suspect the specific nature of these ulcerations. Now this is the chief point, in respect to the most essential matter, the most practical point, that of prophylaxis.

We may permit sexual intercourse to a woman, indeed, simply affected by inflammatory erosions of the cervix, for such intercourse is scarcely ever dangerous to others.

But to a woman affected with ulcerated syphilitic affection of the cervix, such connexion should be absolutely forbidden, for these ulcerations are certainly contagious, and by their contact a man is in risk of acquiring a grave disease, syphilis.

The essential, then, here, is to suspect simply the nature of these lesions in order to forbid connexion, and in order to treat as rapidly as possible their contagious lesions, so as to cut short the possibility of a dreaded contagion.

II. In the second place, ulcerated syphilitic affections of the neck may also be confounded with the simple chancre on the same spot. I only mention the fact here, having already insisted last year on the differential diagnosis between these two lesions.

III. *Diagnosis of Phagedænic Lesions.*—Lastly, gentlemen, a last chapter remains for me to open here in the differential diagnosis of tertiary syphilitic affections of the phagedænic form. And this chapter is neither truly the least difficult nor the least important of those we have treated of up to this time, as you are about to see.

Phagedænic genital syphilitic affections are exposed to be confounded with two orders of phagedæna which are seen on the genital organs—(1), with the phagedæna of chancre, and almost always of the simple chancre, since the syphilitic chancre allows itself to be attacked only in a very exceptional manner by phagedæna; (2), with scrofulous phagedæna.

1. Let us first speak of chancrous phagedæna, or that which results from the simple chancre.

It is not truly a diagnosis easy to establish which relates to a phagedænic ulceration which has devoured a part of the penis or the vulva. Is it a phagedæna or a simple chancre? Is it phagedæna due to tertiary syphilis? The thing is difficult to specify in many cases.

Doubtless we have the antecedents to throw light on the matter. The patient has or has not had syphilis. This is essential to be known, and this alone can throw an immediate light on the diagnosis. But, first of all, these antecedents may be wanting. How often, indeed, do we not see, especially in women, syphilitic affections without special history, without antecedents. This is a point on which I have no further to insist upon with you after what I said at our last *réunion*.

Besides, these antecedents are far from always having a precise signification. The patient, I suppose, has had syphilis; he confesses it, or he presents even at this moment evident marks of it. But is not accumulation permissible? And why will you not allow that this patient, formerly syphilitic, may not have contracted a simple chancre? This is not rare, here especially, and many women of this hospital are affected at once with syphilis and with simple chancres, without preventing the possible coincidence of other venereal lesions.

Hence, venereal antecedents (reserve being made for cases where the patient has not exposed himself to the chance of a new contagion superadded to the former) say nothing against the possibility of a simple chancre actually existing as the origin of the phagedæna. This is precisely the difficult point.

But some one will say, if the antecedents and commemoratives do not enlighten us as to the nature of the lesion, at any rate the diagnosis may be made by the objective symptoms. Objective symptoms? Do not count on those, gentlemen. All phagedænas resemble each other at a given moment. And what the most attentive or most minute examination of the areola of the ulcer can furnish, of its edges, its base, and its sides, ends generally in differences more or less in true and simple shades which have nothing significant in them. I have already witnessed many cases of phagedæna. Well, I declare to you, and that contrary to many authors, I have been very rarely able to be edified by objective characters as to the nature of the lesion.

Other signs derived from the evolution and its complications may better throw light on the diagnosis in certain cases.

Thus, the simple chancre is a lesion originally of ulcerated character, which is born as an ulcer, and which has never been but an ulcer during the whole of its life. Tertiary syphilitic affections, again, on the other hand, sometimes arise as solid tumours, which soften later on. When gummy tumours are present they have a dry period at their *début*, which may be ill recognised, doubtless, but which is not always so, and which is not necessarily so. This is an element in the diagnosis.

The simple chancre presents complications more frequently than tertiary syphilitic affections do. It is more inflammatory in aspect, and more acute in its progress; it suppurates more, and is more frequently complicated with inflammatory complications, with balanoposthitis, either simple or gangrenous, with phymosis, paraphymosis, œdema of the vulva, abscess or fistula, &c. It is also more extensive, and tends to propagate itself beyond the vulva or the penis.

But these complications are still only accidental. When they exist, we may gain some light from them, but when they do not exist (and they often are wanting) there is nothing to be inferred from this. And were they to exist to the fullest degree, they would have nothing absolutely significative. They constitute elements of probability, and not of certainty.

Let us, then, pass over these different considerations, and come at once to the true elements of a formal and absolute diagnosis. Between chancrous phagedæna and tertiary phagedæna I see in short but two signs which are diagnostic clearly and obviously. They are—

1. The existence of the chancrous bubo, to which we may join as annex the chancrous inflammation of the lymphatics.

2. The data of inoculation.

What indications do these two signs give?

1. *Chancre Bubo.*—If the ulceration in question is complicated with what is called a chancrous bubo (that is, by a bubo which suppurates like a chancre, and may be inoculated like a chancre), then the diagnosis is formal and absolute, for there is only the simple chancre which makes a bubo of this kind. The chancrous bubo points to the simple chancre as its origin. It is the witness of it, its demonstration, as I have established in my lectures last year.

But, again, the chancrous bubo is only an accidental accompaniment of the chancre, and is most frequently wanting. Here, again, this is not a symptom on which we can count.

As a last analysis, there remains only in difficult cases a single element of diagnosis. But to this we can always trust, for we have it always at our disposal—we may always consult it: and that is inoculation. Of course, I mean auto-inoculation, the sole permitted, the only legal and moral kind.

2. *Inoculation.*—What does this furnish?

This: Inoculate the pus of a chancrous phagedæna, and you produce a simple chancre, with the formal and irrefutable characters of the simple chancre, which I have described to you. Inoculate the pus of tertiary phagedæna: there is no result, the inoculation remaining sterile and negative. Here, then, at last is a symptom, and a precious sign—a true criterion; this is a sign which may guide us in doubtful cases.

The formal diagnosis of chancrous phagedæna and of tertiary phagedæna resides, and only resides, in the the results of inoculation.

But here, gentlemen, an observation ought to be made at once. Remember that in this actual case we have not to do with any ordinary inoculation—with an inoculation under the ordinary conditions under which this kind of experiment is practised. It is not only a chancre the pus of which you are inoculating in such a case—it is a phagedænic one. Now this phagedænic chancre may reproduce more easily than another a phagedænic inoculation. Of course the experiment will not with certainty produce a phagedænic sore, for if this were the case, not only I would not propose to you inoculation as a means of diagnosis, but I would forbid it, and would consider it my duty to warn you from using it.

But, indeed, on account of the conditions of the soil, and the nature of the lesion from which the pus is taken, there are some risks that when practised in peculiar conditions inoculation may become the origin of a phagedænic ulceration. Thus, on the one hand, we must be as sober as possible in this kind of experiment; we ought even never to have recourse to it except when there is imperative necessity for the patient to know what is the character of the ulceration, and if we have scientific inductions to combat.

On the other hand, if we decide to practise the inoculation, we ought to proceed with more care and precaution than ever, and above all, if the pustule be produced, we must destroy it by the most energetic procedure, without giving it the power or leaving it the leisure to extend itself. Cautery by Ricord's sulphuric acid united to charcoal is here the most simple and most certain plan.

Nevertheless, as counterpoise to what I have said, I would add that there are cases where the utility of this inoculation is such—where there is everything to gain for the patient that the diagnosis be made of his lesion, that inoculation becomes then not only allowable, but necessary. We must then persuade the patient to consent to it, and having obtained his consent (which is indispensible for the dignity and the security of the medical man), we should practise the inoculation; for on this, and this alone, the diagnosis may depend, and, with the diagnosis, the treatment. To convince you of this, I will cite the following case, which struck me forcibly some years ago:—

I had occasion to be consulted by a patient who for some two years had been treated for a supposed simple chancre of the penis. This was always progressing. This chancre, after having destroyed a good half of the glans penis, had attacked the prepuce, and partially laid bare the corpus cavernosum. Nothing had as yet arrested its course. After having for some time examined this hideous wound, I thought from certain signs that I could recognise it for a tertiary phagedænic syphilitic affection, although the patient alleged he had not had syphilis, and that he never had had any other venereal accident than that. Not having been able to bring to this diagnosis the medical man who was treating him, I proposed inoculation as a mode of cutting short the debate, foreseeing that this experiment would have a negative result, and which would be harmless and very useful by the information which would be derived from it. Refused at first, inoculation was accepted two months later, when the ulceration had made further progress. As I had foreseen, it was negative. On this indication the specific treatment was employed, and I have the satisfaction to say that it was followed by a rapid success.

See what assistance inoculation may be to the practitioner, and, above all, to the patient in like circumstances.

2. A few words now about *scrofulous phagedæna.*

It is quite exceptional for scrofulous phagedæna to attack the penis. Of this I have seen but one or two examples. On the other hand, there exists in women a most grave affection, a most hideous one too, which developes itself under the influence of scrofula, and appears on the genital organs, sometimes also on the anus, and that is the lupus of the face. This affection you have already named; it is the genital lupus, the lupiform scrofula of the vulva, or esthiomene.

It is not my business to trace for you here the symptomatology of this affection, which you will find marvellously described either in the original memoir of M. Huguier, or in the recent article of M. Bernutz (" Nouv. Dict. de Méd. et de Ch. Prat.," t. xix). In a word, I will remind you of the principal traits in saying that it is the scrofulous lupus of the genito-anal region. Transport, indeed, the lupus of the face to this region, with its tubercles, its ulcerations, its hypertrophies of tissue, its perforations, &c.—transport it with all its *cortége* of hideous symptoms and mutilations—and you will have exactly the representation of what the genital lupus in women is.

It is useless to ask, in consequence, whether this lesion approaches in appearance tertiary phagedæna, or may be confounded with it, or reciprocally. It is also useless to add that it is of the highest importance to establish a precise diagnosis as to this very important affection. Let us, then, try to trace in a few words the differential diagnosis of these two pathological types.

The objective signs of the lesions we are about to compare doubtless offer a certain number of differences. Thus, the vulvar scrofula has generally a contour which is more irregular and sinuous, more "unciform," as Huguier has remarked; it has its edges less sharply cut, less like a die, more inclined in a gentle slope towards the bottom; it has the base redder, more violet, and more villous; it secretes less, and secretes sanious serosity rather than pus, &c. But these are altogether only differences of small degree, and which are often but slightly significative, subject to vary, and upon which we cannot often build in making a differential diagnosis.

Something characteristic is presented in certain cases by the frequent co-existence with the scrofulous ulcer of little vegetating tumours, pisiform, mammillary, sessile, warty, produced on the non-ulcerated skin, or on the surface of the ulcer itself (vegetating form of esthiomene). But this again is only an accidental symptom, a particular form of the disease, and it offers nothing constant.

On the other hand, a better sign, which I recommend to your attention, because it has struck me greatly in some cases, results from the condition of the parts surrounding the ulcer.

These parts (and it is notably upon the labia majora that we notice what I am about to speak of) present a condition of soft swelling with rose-violet hue of the integuments. The labia majora are swollen and hypertrophied. They are neither œdematous nor pasty, nor indurated, as in common sclerema. They are at once swollen and soft. The cutaneous part offers a morbid suffusion of a rather special tint—*i.e.*, rose-violet, with portions covered by a slight brawny desquamation. Hence arises an appearance which is rather special, and hardly describable, which must have been seen to be remembered, but which gives to the lesion a physiognomy truly rather distinctive.

The evolution and progress of the disease offer also information useful to consult. Thus, scrofulous vulvar lupus has a very slow evolution, much slower than tertiary phagedæna. The progress and destruction take place in months or years, so that if examined after some weeks interval the lesion seems almost stationary.

It is, besides, a phagedenism which takes place on the spot, and has but little or no expansion, which rests confined to the region of the vulva and anus, the opposite of certain tertiary phagedænas, which overpass the vulva and reach the abdomen or the groin.

Next to these two orders of signs, others more general and more certain are again furnished by considerations of a different kind—*i.e.*, the examination of the constitution, of the morbid antecedents, the actual accidents, and the results of treatment.

The examination of the constitution, of the antecedents and actual symptoms, will teach whether, yes or no, the patient is attacked by the scrofulous diathesis, and if he has had or at present has unequivocal manifestations of it; if, yes or no, he has been previously affected with syphilis. It is useless to insist on the considerable value of such pieces of information, which are the first we should inquire about.

But have these pieces of information always an absolute value? do they suffice always to throw light on the diagnosis in an absolute manner? Yes, in the majority of cases; no, in a general way. We must not, in fact, here leave out of sight the two following points of view:—

Firstly, esthiomene of the vulva shows itself most frequently in scrofulous women, who are so clearly from their antecedents and their actual appearance it has been seen to appear in women of middling constitution, who have never before presented any symptom of scrofula.

Besides, syphilis may be added to scrofula, and arise on a scrofulous soil. Hence morbid influences and complexities which are not always easily dissociated.

In the last place there remains the *treatment*, which here, above all, may serve as an element of diagnosis.

Sometimes, the first day of entrance of a patient into hospital, it is absolutely impossible to know what we have to do with, such is the hideous aspect and confusion of the lesions. Then, some days later, when she has been washed, bathed, dressed, had repose, and favourable hygiene, the lesions change rapidly in appearance, become modified and transformed as by magic, and the diagnosis of syphilis may be given by this fact alone.

There is scarcely, indeed, any disease except syphilis which permits those rapid transformations; esthiomene of the vulva, it is generally confessed, is far more rebellious and refractory.

A fortiori, treatment has a still more significant influence after an interval of several weeks.

If the lesion be syphilitic, in some weeks it generally undergoes from specific treatment an evident curative influence, which is manifest. Doubtless there are exceptions to this rule; doubtless tertiary phagedæna has also its rebellious cases. But that is only in the rarest cases. The common case, on the contrary, is the rapid amendment of the tertiary lesions under the influence of treatment.

Again, if we have to do with true scrofulous esthiomene, hygiene and antisyphilitic medication do not modify it. The antiscrofulous treatment even remains without action on it, or modifies it only with extreme slowness, almost desperately so; most generally it remains inefficacious.

So that the diagnosis, if it remain sometimes undecided at first, is not slow in general to be made by the influence of treatment.

C. R. Drysdale, M.D.

BRITISH MEDICAL ASSOCIATION.

EDINBURGH MEETING.

ANCIENT AND MODERN PRACTICE OF MEDICINE.

ABSTRACT OF THE ADDRESS IN MEDICINE.

By J. Warburton Begbie, M.D.

Quoting in the outset Sir W. Hamilton's question—"Has the practice of medicine made a single step since Hippocrates?"—Dr. B. proceeded to consider what such practice was at the time of the Greek physician. The foundation of the practice of Hippocrates was, he said, experience; but this experience was rational in character, not a mere blind or misguided empiricism. No one could be more convinced of the fallaciousness of a blind empiricism than he was; he believed in the existence of a principle, a spiritual essence, the preserver of all things in nature, the restorer of whatever had become disordered. The regulation and superintendence of all the actions of the system were due to this principle, to which he gave the name of Physis, Nature. Thus he was led to consider that the chief duty of the physician consisted in watching the operations of Nature, endeavouring, as might be the case, to promote or restrain these, possibly in some, but these very rare instances, to counteract them. The belief which he had in the *vis conservatrix, vis naturæ medicatrix*, would in the first place make him, as we know from his writings he really was a very close observer of the operations of Nature. It would further render him cautious in regard to interference with these, and resolute in his determination "to have two special objects in view with regard to diseases—namely, to do good, and to do no harm." There is, however, no ground for concluding that Hippocrates was an inert or purely expectant practitioner. On the contrary, there is abundant proof in the works which bear his name that in limiting, as Sydenham has expressed it, "the province of medical art to the support of Nature when she was enfeebled, and to the coercion of her when she was outrageous," Hippocrates found occasion to be bold and decided in his method of treatment. His employment of powerful remedies is best exhibited in the instances of diseases which, according to the humoral doctrine promulgated by him, were to be relieved by the discharge of some peccant humour. Evacuants of various kinds were used with this intention, purgatives more especially, but likewise emetics, diuretics, and sudorifics. He drew blood by means of the lancet, the scarificator, and the cupping instrument, but with what careful consideration and thoughtfulness is well shown in the treatise "On the Regimen in Acute Diseases." A study of the method of treatment pursued by the Father of Medicine and his immediate descendants exhibits the fact that their rules of procedure were were all based on experience. He had the merit of discovering the great truth, that accurate observation in medicine is the real foundation of all knowledge, and he proceeded in the true spirit of the inductive philosophy to generalise solely from the phenomena thus observed. It can never cease to afford material for wonder that through the genius of one man so much was accomplished, when we reflect on the circumstance that in the time of Hippocrates human anatomy had scarcely, if at all, been practised, that physiology was virtually unknown, and the use of remedial agents was almost entirely limited to articles of the vegetable kingdom, and these the indigenous plants of Greece and the neighbouring countries. To the subject of diet and regimen, however, Hippocrates paid the greatest attention. In the Hippocratic writings there occur terms which exactly correspond with those we so frequently employ; full, ordinary, and low diet. It is sufficient in passing to make brief reference to the paramount importance he attached to the doctrine of crisis, and to the bearing which this had on the treatment of diseases. The doctrine of crisis, indeed, was an essential part of his system of humoralism, and had in consequence an intimate connection with the method of treatment he pursued. Critical events were evacuations of different kinds, occurring chiefly by the skin, bowels, and kidneys. With the views he entertained as to crisis, there is further intimately blended the so-called Hippocratic doctrine of critical days. Galen expressly affirms that Hippocrates was the first author who treated of these; but, whether this be true or not, we know that he attached very considerable importance to the doctrine. Again, he exhibited profound sagacity in the observation of the influence of external agents on men in health and in disease. This is fully exhibited in the treatise, in which the operation of the atmosphere, of particular seasons, situation and dwellings of the people, in the production of health and diseases of different kinds is discussed. The most enlightened inquirer concerning public health, be he legislator or physician, will find much to instruct him in the pages of Hippocrates.

The narration of individual cases of disease commenced with Hippocrates, who may be said to have been the originator of the clinical study of medicine. After citing the Greek physician's account of a certain case in comparison with the recent record of a somewhat similar case by Dr. Laycock, and showing, among other points, that much is due to Hippocrates in reference to diseases of the chest, and that under the designation of Hippocratic succussion we possess a means of physical exploration of the chest which was practised by the Father of Medicine, Dr. Begbie said it would be very easy to multiply references to important and suggestive passages in the Hippocratic writings tending to establish yet more fully the truth of the statement that the Father of Medicine was enabled, by the exercise chiefly of his most remarkable powers of observation, to acquire a really wonderful amount of accurate information regarding the causes and progress of diseases, as well as the influence exerted by various remedies over them.

Dr. B. asked, was Sir William Hamilton entitled to depreciate the medical practitioners of his own time, which he surely did when exclaiming, "Has the practice of medicine made a single step since Hippocrates?" For centuries after the Hippocratic epoch, it may truly be said that little or no advance in medicine was effected. Many learned and ingenious men no noubt did appear in the ranks of the profession, and by them the position which had been achieved for medicine by Hippocrates was at all events maintained. But any scientific practice of medicine before the physician had been able to acquaint himself with human anatomy was not to be expected; and it is truly marvellous that Hippocrates, Aretæus, Galen, and the Arabian physicians, notably Rhazes, were able to achieve so much, and to hand down to posterity a body of well-observed facts and careful deductions from these facts, wearing so much the aspect of science. Medicine can, however, be said to have started on a scientific basis when Mundinus early in the fourteenth century applied himself with diligence to the dissection of the human body, and published a treatise on anatomy, which, till the middle of the sixteenth century, was the recognised text-book of the schools.

The lecturer went on to mention several eminent men by whom the practice of medicine was advanced during the sixteenth and seventeenth centuries. Coming to Thomas Sydenham, he said that eminent physician has frequently been called the English Hippocrates, and, in truth, the appellation is deserved, for, like the illustrious Greek, the great aim he set before him was the cure of disease, and, although possessing a mind which delighted in speculative inquiry, he never permitted the theories he formed and ably defended to interfere with his treatment. That was based on a rational empiricism, such as we have seen in the instance of Hippocates; he carefully watched the operation of the remedies he employed, and from these he drew the indications for further guidance. Sydenham was humoral in his pathology, and he further agreed with Hippocrates in the doctrine of crisis, and the subsidiary view as to action and crasis. Reference was then made to Borelli, who endeavoured to explain the operation of the various functions of the body on mechanical principles; as also to Van Helmont, who held that all the changes occurring in the body, whether arising spontaneously or produced by remedies, are determined by a specific agent inherent in the living system, to which he gave the name of Archœus. Then came Stahl, to whom belongs the great merit of having pointed out that, contrary to the prevalent opinions of the schools, the operations of the animal economy cannot be explained by either chemical or mechanical laws; that there exists something over and above these; and that something is of the nature of vital action. The anima of Stahl, however, was a hypothetical principle, and he signally failed to gain for his theory any general support. Hoffmann, his distinguished colleague in the University of Halle, and his rival, conferred a lasting benefit on science by pointing out that the actions which were ascribed by Stahl to the government of his "anima" were in reality determined by nervous influence. Great discoveries in the nervous system have been made since the time of Hoffmann—such discoveries as have rendered the names of Charles Bell and Marshall Hall in particular, but many others in lesser degree, famous. In no department of pathological inquiry is there at the present time exhibited a greater amount of zeal, or are important facts being more frequently brought to light, than in that pertaining to the nervous system. We can distinguish between functional and organic diseases of the brain, spinal cord, and nerves; and use our remedies in a way of which not only the ancient physicians, but many among the moderns, could not have dreamt. The services of Boerhave and Haller were next touched on, and in reference to Cullen, the lecturer remarked that a very erroneous impression of this great Scotch teacher has been entertained by many, more particularly by foreigners. By such Cullen has been called a purely speculative physician. The condemnation of this opinion is readily supplied by his own words. "There is nothing," he observes, "I desire so much as that every disease we treat here should be a matter of experience to you, so that you must not be surprised that I use only one remedy when I might employ two or three; for in using a multiplicity of remedies, when a cure does succeed, it is not easy to perceive which is the most effectual." The foundation of the practice of physic was expressly stated by Cullen to lie in fact and experience. To him we are largely indebted for the introduction into general use by medical men in this country of such remedies as the acid tartrate of potash, tartar emetic, hyoscyamus, and James's powder, or the pulvis antimonialis. A successor of Cullen, one of the most distinguished physicians in recent times, as he certainly was also one of the most benevolent of men, the revered Dr. Alison, when indicating the way by which, in his opinion, further improvement in the art of medicine was likely to be effected, signalised the two following lines of inquiry—First, in the discovery of specifics which may counteract the different diseased actions of which the body is susceptible, as effectually as the cinchona counteracts the intermittent fever, citric acid the scurvy, or vaccination the small-pox; and second, in the investigation of causes of disease, whether external or internal. It will be readily admitted by all candid inquirers that, under the latter head, very signal advances have been made during the last half century. Look, for example, at the etiological investigations regarding continued fevers, and the bearing of these upon treatment, with which the names of Jenner, Stewart, Bartlett, Murchison, and Buchanan are so intimately connected. Again, consider the great advances in knowledge of parasitic diseases—the entozoa more particularly—and their appropriate treatment, for which we are largely indebted to Kuchenmeister, Von Siebold, Davaine, and Cobbold. Of specifics we still possess but few; while the desire to increase their number is not only legitimate, but is likely sooner or later to be gratified. Of the class of specifics, no remedy better deserves the name than quinine. The potent action of quinine in intermittent fevers thoroughly justifies the application to it of the term specific; and it is to be noted that the curative action in question is to be seen not only in febrile disorders of the intermittent type, but in neuralgias which manifest a similar character. A remedy of marvellous power and usefulness, the virtues of which we are still only learning, is the iodide of potassium. And, whereas, twenty years ago, little was known regarding the virtues of bromide of potassium, since then, and more particularly within the last few years, that medicine has rapidly advanced in professional estimation; and, at the present time, it may with confidence be affirmed that there are very few more largely employed, and the use of which is attended by more signal benefits. As a calmative and hypnotic, bromide of potassium is largely confided in; but its specific operation in epilepsy is of the most striking description. In the treatment of tubercular disease and of other allied constitutional disorders, cod-liver oil was first employed in the Manchester Infirmary, chiefly by the elder Bardsley, after the commencement of the present century. Subsequently it was largely used in Germany; but, falling into disuse in this country, its restoration to professional and public favour has followed the publication of Dr. Hughes Bennett's recommendation of its virtues, in his excellent treatise on that subject. We have, Dr. Begbie continued, been alluding to the manner in which the practice of medicine has been advanced, and may doubtless be still further advanced, by the simple method of observation and experience. It is true that we cannot entirely depend upon empirical laws. Still such laws are of the highest value, and we cannot help employing them. The recent progress of chemistry, physiology, and pathology has naturally led to the establishment of an advanced school of therapeutics, from whose labours signal benefits may not only be anticipated for medicine, but have already been conferred upon it. Care must, however, be taken that the results of scientific inquiry and those of patient, oftentimes laborious, observation in the field of practical medicine running counter, do not interfere with the ultimate grand object of our profession—the healing of the sick. We are not entitled to withhold remedies because we do not understand their exact nature, nor the minute changes they produce in the animal economy. Let each one of us be fully persuaded in his own mind. While deeply interested in, and much instructed by, the experiments performed by a committee of this Association, regarding the use of mercury, for example, I remain as thoroughly convinced as ever that the much-abused drug in question exerts a powerful action on the function of the liver, and is to be trusted as a most efficient remedy in controlling not a few of its disorders. I regard cold as a powerful antiphlogistic, and its external application as a remedy of unquestionable value in the treatment of hyperpyrexia; but my own observation, and the fullest attention I have been able to give to the recorded observation of others, have convinced me that the real reason for the present abandonment of a remedy of superior power—to wit, blood-letting—does not lie alone in the advance of scientific pathology.

SURGERY OF THE AIR-PASSAGES

(From the Address in Surgery by James Spence, F.R.S.E.)

In the important department of the injuries and diseases of the air-passages great advances have been made both in regard to diagnosis and to treatment. The use of the laryngoscope in cases of chronic or subacute disease of the larynx, and for enabling us to ascertain how far the symptoms depend on organic changes, or merely on paralysis or spasm affecting the vocal cords from diseased innervation, or for discovering the position of small foreign bodies entangled in the larynx, or of intralaryngeal growths, is an invaluable accession to diagnosis, and in determining the question of operation and plan of procedure in different circumstances.

The operation of tracheotomy has also been extended to a class of cases in which it was formerly considered unsuitable; and new operations, such as the partial or even complete excision of the larynx, have been successfully performed; and in one case by Professor Billroth, an artificial substitute was adopted, which enabled the patient to speak and read intelligibly.

Having had a very considerable experience in operations on the air-passages for injury or disease, I desire briefly to draw attention to some practical points. First, as regards injuries. There are some conditions not sufficiently insisted on in surgical works as to their dangers, or the practice to be adopted, where action requires to be prompt. Thus the danger from emphysema of the loose connective tissue of the neck is seldom adverted to; and yet I have seen a patient all but suffocated from this cause from a small oblique wound of the larynx inflicted with a penknife. In that case I had to perform laryngotomy, and was obliged to make numerous incisions to afford relief; when a simple enlargement of the wound, in the first instance, would have allowed the air to escape externally. Again, in tracheotomy for removal of foreign bodies, it is generally considered unnecessary to use a tube after the foreign body has been expelled, but merely to allow the incision to close at once. The consequence is that a good deal of trouble often results, for the wounds in the trachea and the superimposed parts do not correspond, and air and mucus escape into the cellular tissue, sometimes giving rise to considerable emphysematous swelling of the neck, and often leading to deep-seated irritation of the wound. In my own operations after removal of foreign bodies, I insert a tracheotomy tube, and retain it until the surface of the wound is glazed by the effusion of lymph; and then approximate the margins of the wound by strips of plaster, so as to avoid all risk of confinement of air or mucus in the tissues in the vicinity of the trachea. Another point of importance is the question of exhibiting anæsthetics in operations for removal of foreign bodies. Many years ago I drew attention to this, and pointed out that when the foreign body was loose in the trachea or bronchus, the exhibition of anæsthetics interfered with the force of the expulsive powers which usually eject the foreign substance; and, as happened in one of my own cases, the foreign body may be carried back by the incoming current of air, occlude the bronchus, and cause collapse of the corresponding lung. In other cases, as when the body is impacted in the bronchus or larynx, anæsthetics are most useful in enabling us to search for and remove the foreign substance In doubtful cases, the rule should be to open the trachea without using anæsthetics; and, if the foreign body be not expelled by the natural forces, then to administer chloroform to enable us to deal with it effectually. When, as in the case I have alluded to, a foreign body, such as a plum-stone, is impacted, and fairly occludes the bronchus, being carried before the inspired air, it follows that, the lung beyond being collapsed, there is no force behind to eject the substance. In such circumstances, it is well to avoid trying too much to displace it by means of bent probes or other instruments, unless the end of the instrument can be passed over and beyond the body, so as to tilt it out or allow air to pass to the lung beyond. Our continued efforts, besides exciting local irritability, are very likely to impact it more thoroughly; and I would therefore counsel the surgeon to abstain from useless efforts, and allow the patient to breathe by the sound lung, and wait the loosening of the foreign body by vital dilatation caused by its presence, when air will gradually pass beyond and expel it.

In hollow or tubular foreign bodies, the case is different; they can be easily removed if we take the proper method—one which I practised some thirteen years ago, in a case where this trachea-tube had slipped down and became impacted in the left bronchus. Instead of trying to open the forceps and seize the edges of the tube, I passed the forceps closed into the tube, and then, on expanding the blades and maintaining them expanded, the foreign body was withdrawn with the utmost facility.

The propriety of tracheotomy in cases of threatened asphyxia from œdema glottidis, arising from swallowing boiling fluid or inhaling the steam of boiling water, would seem so evident as affording the only chance for life, that we would scarcely expect any difference of opinion; and yet I find it is by some considered unwarrantable, because the average results of such cases show few recoveries. Now, in the first place, I doubt if we have statistics so extensive or accurate as to warrant such a conclusion; but allowing that the recoveries are few, we see that the want of success is mainly due to the fact that these injuries implicate other structures, such as the pharynx or œsophagus, or are complicated with the shock and other conditions of general scald. If, however, in such injuries, œdema of the parts about the glottis threaten asphyxia, it is evident that the patient has no chance of life, except by the operation; whilst no one will venture to deny that tracheotomy has, in many such cases, rescued the patient from impending death.

The value of tracheotomy in the acute and chronic affections of the larynx in adults, whether to afford relief from suffocative paroxysms or as a precautionary measure, is now so generally admitted that I need not occupy your time with that; but I desire to draw attention to two classes of cases in which this operation is sometimes performed, as affording temporary relief from suffocative paroxysms or impeded respiration. I mean (1) cases of aneurism or tumours pressing upon the laryngeal nerves, and causing spasm of the glottis; and (2) aneurismal tumours of the aorta or innominata impeding respiration by direct pressure on the trachea at the root of the neck. In the former class of cases, I consider that the operation is not only warrantable, but advisable, or even imperative, because it gives relief from impending suffocation, and also alleviates conditions which tend to increase the aneurism, or even to hasten its rupture; so that tracheotomy prolongs life with comfort to the patient. In the second class of cases (aneurismal tumours at the root of the neck, pressing directly on the trachea), I cannot see the principle on which the operation is recommended. In such cases, the tumour is lower down than where we can open the trachea; and if we use a tube long enough to pass beyond the aneurism, we are in great risk of rupturing the sac, which generally, in such cases, presses upon, and causes absorption of, the tracheal fibro-cartilages, and projects the mucous membrane. Indeed, as pathological specimens show, the tracheal textures become incorporated, as it were, with the sac, and the aneurism generally thins and tends to ulcerate towards the trachea. Hence I cannot see how an opening in the trachea on the distal side of the impediment can relieve the breathing, whilst there is very evident risk of killing the patient by wounding the projecting and attenuated sac in opening the trachea, or rupturing it in trying to pass the trachea-tube beyond it. Here is a preparation from a case in which I made a very narrow escape from being involved in a most unpleasant predicament. I was asked to see a lady who had long suffered from bronchitis and asthmatic attacks, and in whom laryngeal symptoms seemed to indicate commencing œdema glottidis. As the medical gentleman informed me that the late Dr. Begbie had been seeing the patient, and as I understood that the laryngeal symptoms were not very urgent, I suggested that Dr. Begbie should be first asked to see the patient; and if he considered tracheotomy advisable, I would come and operate. I heard nothing farther until, meeting the medical attendant a day or two afterwards, I inquired about the case, and was informed that, after Dr. Begbie had examined the patient generally, he proceeded to examine the throat and mouth by gently depressing the tongue; this caused retching, followed by a fearful gush of arterial blood, which proved instantaneously fatal. If I had operated, the insertion of the tube could scarcely have failed to have ruptured the sac, and I leave you to conceive the situation. I think I have said enough to show that I am decidedly opposed to operation in cases of this latter class. But should anyone be inclined to operate, I would advise the use of a large-sized, bulbous-pointed, soft gum catheter, with an enlarged opening, to pass beyond the tumour, instead of the metallic tube.

Although from an early period tracheotomy was occasionally resorted to in croup in children, it is only of comparatively recent date that it has been recognised as a warrantable operation in such cases. In this city and in Leith croupous affections used to be very common, and yet the operation of tracheotomy was so rare that I never saw it performed for croup when I was a student; indeed, so great was the prejudice against it, that I have been informed that in 1820 a medical gentleman of high standing in this city, who was anxious to afford a chance of relief to two of his children affected by croup, could not prevail on any of the principal surgeons to perform tracheotomy. At his urgent request, Dr. Brice, a gentleman in general practice, operated on one of the children, without ultimate success, as both the children died. This strong prejudice against operations in croup arose, I think, from somewhat erroneous views regarding its pathology. In post-mortem examinations, the false membranes extending from the larynx into the trachea and bronchi, and often found in the form of complete tubular casts—a condition so different from the laryngitis of adults—led to the idea that the trachea was affected in the first instance, or at least simultaneously with the larynx, and the disease was named "cynanche trachealis," in contradistinction to laryngitis. Hence most physicians and surgeons considered it improper to operate when the disease, as they thought, was situated at and beyond the part where the aperture in the trachea could be effected. From what I have noticed of the progressive symptoms of croup, and seen of the state of the diseased parts in cases when children died in the early stage, and especially from the immediate relief from impending suffocation afforded by tracheotomy even in cases which subsequently proved fatal by extension of the false membrane, I feel satisfied that the disease always commences in the larynx, and only extends downwards as it progresses; and hence I dismiss the objection that the disease is from the first situated too low down for tracheotomy to afford relief. The principal objection to operating in croup is undoubtedly the tendency of the disease to spread downwards after the operation. We owe it to our Continental brethren, especially to Trousseau, that tracheotomy in croup has now become an established operation. I must confess that from early teaching I was strongly prejudiced against the practice; but, fortunately for me, it happened that a child was brought to me in the agonies of suffocation, so that I could not but try to relieve it. The relief was immediate and the result successful, and thus I could not deny the like chance to others. I have now performed tracheotomy for simple croup and diphtheritic croup one hundred and three times, and saved thirty-four out of that number, or an average of about one life saved in three cases; and it must be remembered that at first I only operated as a last resort, and even yet I do not see my way to operate quite so early as some French surgeons seem to do. I think, however, that there should be no delay when the character of the breathing and the contracted state of the thoracic parietes show that the lungs are not being distended with air. By operating early we avoid the risk of œdema or congestion of the lungs, and of the effects of non-oxygenised blood circulating in the brain.

I think it right, however, to warn my younger brethren that it will require some effort to bear up against discouraging results. I know of no class of cases in which the experience is so painful: an average gives little idea of it. You may have five or six cases in succession, all proving fatal, before you meet with one redeeming success; but then you have the temporary relief almost invariably afforded to the little sufferer; the resuscitations in some cases apparently dead; and, if you persevere, the average of success will come. Above all, we must recollect that, however disagreeable or unpleasant the operation may be to ourselves, we are bound to lose sight of that, and give the patient the only chance for life.

In speaking of operations in croup, I have used the terms simple and diphtheritic croup; and I have done so advisedly, because, whilst the average results of my operations have been as good in the one disease as in the other, I consider them as essentially different diseases, and I do not believe that an extended experience would give the same amount of success in diphtheritic as in simple croup. It has been with no small amazement I have read some of the views recently propagated, that croup and diphtheritic croup are identical. I can hardly conceive two diseases more different, whether we consider them in their causation, symptoms, or sequelæ. In one feature, doubtless, there is similarity, because when in diphtheria the air-passages become affected, the presence of the membrane exuded necessarily gives rise to the same physical symptoms as to sound of voice, breathing, and asphyxiating paroxysms, as the false membrane in simple croup does. But in diphtheria, the exudations in the larynx or elsewhere are the local expression of a special blood-disease, which may and often does destroy life without affecting the air-passages at all, whereas in simple croup the false membrance is the result of a local inflammation. The causes or circumstances in which the two diseases originate are, according to my experience, very different. Ordinary croup almost invariably arises from exposure to cold, or occasionally from some source of local irritation, leading directly to inflammation of the mouth, as dentition. It is most frequent during cold moist weather, and specially during the prevalence of easterly or north-easterly winds. The late Professor Alison used to say that, according to his observation amongst the poorer classes, the affection most frequently occurred between Saturday night and Monday morning; and he attributed this to the custom of washing the floors of the rooms on the Saturday night after the children were in bed. Diphtheria, on the other hand, prevails at all seasons and during all kinds of weather—sometimes as an epidemic, and then generally coincident with scarlet fever, but always more or less connected with, or influenced by, the effects of sewage-emanations or imperfect drainage. Hence we meet with it more frequently amongst the better classes and in houses with modern accommodations, such as fixed wash-basins and water-closet accommodation in immediate connection with nurseries or bedrooms.

Diphtheria is undoubtedly infectious both by direct contact of the sputa with a healthy mucous surface, as has been too often proved by members of our profession and by mothers, or by emanations from the affected person, as evidenced by the manner in which it spreads in a family. Simple croup, as I have been accustomed to see it, has no such contagious or infectious character. In dispensary practice, I have frequently seen a child affected with croup lying in a confined room amongst other children; but I never knew the disease to spread as diphtheria does. The peculiar nervous affection, the paralysis which follows diphtheria, has no counterpart in ordinary croup; nor, in cases of simple croup, were we accustomed to see the white leathery pellule on the tonsils or fauces, though it was a very common disease in Edinburgh and its vicinity. I know that in France the fauces were always examined, and that false membranes or pellicles were considered symptomatic of croup; but that only leads me to believe that the disease in France was always of a different type—diphtheritic, in fact.

The bold operation for complete removal of the larynx for malignant disease, successfully carried out by Professor Billroth, and the adaptation of an artificial substitute, so ingeniously constructed as to enable the patient to read and speak, has not, so far as I am aware, been yet practised in this country, though I understand other successful results have been obtained on the Continent. Looking at what has been done, may we not anticipate a time when operative skill and mechanical ingenuity proceeding *pari passu* may reduce the dangers of the operation to a minimum, and advance the powers of the artificial substitute to the maximum; and so enable an unfortunate ungifted with the power of song to get rid of his unmusical larynx, and suit himself with one, *à la* Mario or Lablache, according to his taste?

IN THE LABORATORY.

ALBUMEN IN URINE.

Adamkiewicz (*Berichte der deutschen chemischen Gesellschaft*) mentions a new test for albumen. The albumen is dissolved in excess of glacial acetic acid and treated with strong sulphuric acid. A beautiful violet colour then appears and a feeble fluorescence. When the solution is concentrated and examined spectroscopically it shows an absorption band which lies between the Fraunhofer lines *b* and *F*.

This test is very delicate, and is applicable to any variety of albumen, including peptone.

Referring to Adamkiewicz's test, Dr. E. S. Wood, in his "Report on Medical Chemistry" in the *Philadelphia Medical and Surgical Journal*, says:—

"This test reacts with a few cubic centimetres of a solution of egg albumen which contains one part of albumen in two thousand parts of water."

STRYCHNIA.

Dr. E. S. Wood (*Philadelphia Medical and Surgical Journal*) says that the artificial conversion of brucia into strychnia has been effected by Sonnenschein. Brucia is treated with four or five times its weight of dilute nitric acid, and the mixture gently warmed; effervescence takes place and a reddish-coloured liquid remains. "If the red fluid after concentration be shaken with ether, and the ether after being decanted is evaporated, there remains a red pigment, a yellow resin, and a crystalline base, which can be purified by dissolving in an acid and crystallising. The base is strychnia."

If this relation between strychnia and brucia can be shown to be constant, and it can be proved that the transformation can be effected at will, an important relation between brucia and strychnia will have been established. It yet remains to connect them in some way with igasuria, the third alkaloid of nux vomica. It is just possible, however, that the result in this case may have been caused by some peculiar conditions which it may not be easy to reproduce.

A DANGEROUS MIXTURE.

We learn from a Viennese paper that the following prescription was recently sent to a pharmacist of that city to be made up :—

℞ Chromic acid, 8 grs.;
Glycerine, 1 fl. drachm.

For external use.

The dispenser dissolved the acid by shaking it up with a little water in a small phial; he then proceeded to add the glycerine, and then again shook the bottle, whereupon the compound which had formed exploded with a loud report, and was forcibly projected to the ceiling. The phial did not break, but remained in the dispenser's hand. On examining it afterwards it was found to have become coated with a black pigment.

It may not be generally known that glycerine and chromic acid are incompatible with each other; but this fact proves it very clearly, and shows the danger which must attend the mixture of these two substances. It may not be amiss to remark that glycerine is incompatible with several other substances besides chromic acid, inasmuch as it decomposes them, *e.g.*, bichromate and permanganate of potassium are decomposed by glycerine. These facts should lead us to prescribe glycerine in a mixture with very great caution.

UNCHANGEABLE SOLUTION OF MORPHIA.

M. **Vidal** lately communicated to the Société Méd. des Hôpitaux a formula for a solution of morphia and chloral which will keep for several months without change. The formula is as follows :—

Hydrochlorate of morphia, 1 part;
Chloral, 2 parts;
Water, 100 parts.

He claims that by adding chloral to morphia the latter is thus prevented from decomposing.

NOTES, NEWS, AND GOSSIP.

Prof. Eberth (*Virchow's Archiv.*) has discovered the presence of bacteria in the sweat.

Prof. Baeyer is the successor of Liebig as Professor of Chemistry at Munich.

Quacks and Quackery in France.—A writer in the *Gazette Hebdomadaire* concludes an article on this subject with the remark :—"We repeat, the press is, in all civilised countries, the *alma mater* of modern charlatanism."

Clarke's Blood Mixture.—An analysis of this widely advertised nostrum, by Dr. Alfred S. Taylor, shows it to have the following composition :—

Iodide of potash, gr. 64;
Chloric ether, ʒiv.;
Liquor potassæ, m. 30;
Water coloured with burnt sugar to ℥ 7½.

Deceptive Vision.—There is a tendency in the eye to enlarge the upper portion of any object on which it looks—a fact which we find admirably illustrated by a row of ordinary capital letters and figures :—

BBBBBBSSSSSSSSSXXXXXX888888888888

They are such as are made up of two parts of equal shapes. Look carefully at these, and you will perceive that the upper halves of the characters are a little smaller than the lower halves,—so little that an ordinary eye will perhaps declare them to be of equal size. Now turn the page upside down, and, without any careful looking, you will see that this difference in size is very much exaggerated; that the real top part of the letter is very much smaller than the bottom.—*The Laboratory.*

Oleomargarin.—The *Pacific Medical and Surgical Journal* says that one of the most senseless things ever done by the Californian press was the crying down of oleomargarin, or suet-butter. "The idea was propagated that it was made from dirty tallow, whereas the freshest and cleanest tallow is required—such, for instance, as is devoured without hesitancy (*hesitation* ?) by the daintiest people, under the name of suet, in plum pudding and mince pie." The editor goes on to say that the article made in San Francisco was "quite as good as the average of winter butter."

We confess we are surprised to hear this editorial plea for oleomargarin in a medical paper. Suet may be all very well in its way, and we hope we are none of us insensible to the Christmas charms of plum pudding and mince pie—that is, when the festive season of Yule-tide approaches—but to mix up suet and then call it suet-butter, or by some such high-sounding name as oleomargarin, is nothing better than a delusion, a snare, and a cheat.

Electricity in Jaundice.—The treatment of jaundice by electricity has often proved successful. The procedure is certainly worthy of trial. The position of the gall-bladder is first found out by percussion, and to this point the electrode of an inductive electric machine is applied. The other electrode is placed on the opposite side of the abdominal wall. When the current is passed, a gurgling sound may be heard, and the cure is often immediate.—*American Med. Weekly.*

Medical Associations in Australia.—The question of organising an Australian Medical Association has been raised. *The Australian Medical Journal* estimates that there are about 1,200 practitioners in the Australian colonies, including Tasmania, of whom something less than 500 are in Victoria, rather more than 400 in New South Wales, about 150 in South Australia, probably 100 in Queensland, and about 60 in Tasmania. In Melbourne and Adelaide there are medical societies, and there used to be one in Sidney. The Medical Society of Victoria numbers about 120 members, and this is by far the largest number of the 1,200 who have ever associated themselves together.

Colour of the Blood in Leucocythæmia.—It has been insisted upon up some observers that the blood in this affection has a *milky*-white colour, easily recognised when a drop is placed on a microscopical slide. A drop of blood, taken from the patient by whose bedside we stood, presented the characteristic milk-white colour, but unfortunately no undue proportion of white blood-globules was discovered, and the reason was that a single drop of blood taken from any person and placed on a glass cover will present *the same appearance.* —*New York Medical Record.*

The German Public Health Association.—This Association meets this year in Munich, on September the 13th, 14th, and 15th. The subjects laid down for discussion are as follows :—

1. Determination of a plan to study epidemics of typhus.
2. On the hygienic requirements of new buildings, especially in the new quarters of large cities.
3. Requirements of the diet in orphan asylums, barracks, prisons, and also in common life.
4. On the objects, means and limits of the inspection of bread and meats.
5. On public slaughter-houses, with special reference to the duties of communities toward butchers.

The Climate of Sumatra.—It is said that out of 6000 men sent out by the Dutch Government against the Achinese in Sumatra, 1000 deaths have taken place since last December from cholera and other diseases.

Silica in Cancer.—Have any of our readers tried Mr. Fawcett Battye's remedy? No doubt they often feel at a loss for a new anodyne with which to "ring the changes." Mr. Battye recommends silica finely powdered, in one grain doses three times a day. He does not claim that this remedy is curative, but he says that it greatly diminished the pain. We are not much surprised at this, for we find that he added to each dose of the silica one-third of a grain of morphia. Did it never occur to him that the morphia alone would relieve the pain? Can as much be said for silica alone?

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THE DOCTOR.

LONDON, OCTOBER 1, 1875.

Multum in parvo.

LOCALISATION OF FUNCTIONS IN THE BRAIN.

Dr. Brown-Séquard, in a lecture before the Boston Society of Natural History, published in the *Boston Medical and Surgical Journal*, dissents altogether from the conclusions that have been drawn on this subject, and which have lately occupied so much attention.

Our readers will remember that Fritsch and Hitzig, followed by Charcot, Ferrier, and others, concluded that the fronto-parietal convolutions of the brain are the centres for the voluntary movements of definite groups of muscles; but Brown-Séquard explains the facts in quite another way. He thinks lesions of the brain produce symptoms not by destroying the functions of the part where they exist, but by exerting over distant parts either an inhibitory or an exciting influence, and in this way he accounts for the clinical fact that the character of the symptoms in brain disease is so independent of the seat of the lesion that a great variety of symptoms may arise from a lesion of one part, and also the same symptoms may be due to most various causes, various not only as regards the kind, but also the seat of the organic change. Each functional centre, according to Brown-Séquard, is located, not in a cluster of cells collected into a limited and well-defined part of the brain, but in cells widely diffused throughout that organ. With this theory we can understand why considerable lesions of both sides of the brain may exist without any loss of function. It is, not, however, so easy to see why disease in one part of the brain should destroy the function of distant parts of that organ; but probably such cases are due to alterations in circulaiion and nutrition caused by the disease, in the same way as lesions of the hemispheres produce disease in distant organs, as the lungs, joints, &c.

Fritsch and Hitzig, as well as Ferrier, produced movements of definite groups of muscles by galvanising certain so-called centres. Dr. Dupuy at once objected that such movements are due to the current being propagated to other parts, and Rouget and others support him. Moreover, we are now told that the results are not absolutely constant, and Brown-Séquard objects—1. That the supposed centres are not situated in homologous parts in different animals. 2. These centres do not differ in size in proportion with the size of the muscle moved. 3. Instead of one the orbicularis has three in dogs and cats; the sterno-cleido-mastoideus has from three to five; and these various centres for one muscle are wide apart from each other.

Vulpian has succeeded in obtaining the muscular movements after the choking up of the vessels of the cortex cerebri by injecting lycopodium as distinctly as before the operation. Again, it is not true, as many suppose, that paralysis is always produced by destruction of the supposed centres, and, when it does occur, it is not necessarily permanent. Then Prof. Rouget has related a most remarkable experiment. Having paralysed one anterior limb by destruction of the cortical centre of the opposite side of the brain, he proceeded to destroy the centre of the other side, but instead of paralysing the second limb, this operation only cured the first. Dr. Brown-Séquard collects a large number of cases to show that unilateral convulsions occur more frequently in the limbs on the same side as the brain lesion, and not on the opposite side, as often supposed, and he holds that the kind of lesion has more to do with the appearance of convulsions than the seat. He remarks, too, that convulsions may be produced by disease in any part of the brain, while they may not appear in disease of any part or any kind, and similar differences may be noted in reference to their intensity and frequency.

Dr. Brown-Séquard has lately emplyed the actual cautery at a white heat to the brain instead of galvanism. In no case was any movement observed under these circumstances, but to his great surprise the animals some days afterwards showed signs of paralysis on the side of the cerebral injury. This is very interesting, although paralysis on the side of the brain lesion in the human subject can scarcely be so rare as many believe, since Brown-Séquard himself collected more than 150 cases.

It is clear that if a paralysis can appear on the side of an injury to, or a disease of the brain, we are not to look upon it as an effect of a loss of function of a supposed motor centre.

Dr. Brown-Séquard concluded his lecture as follows :—"If we survey all the facts brought forward to support the supposition that there are distinct psycho-motor centres in the brain belonging to each set of muscles performing a distinct kind of movement, we find that it is impossible to admit that these centres occupy a separate, well-defined, and limited territory in some of the convolutions of the anterior and middle lobes of that organ ; and we find also that the supposition brought forward in the beginning of this lecture, that the nerve-cells endowed with each of the primary functions of the brain are disseminated through that organ, so that no local lesion or irritation can reach more than a part of those endowed with the same function or the same kind of activity—we find, I repeat, that this supposition is supported by most of the known facts and out of harmony with none."

CHRONICLE.

RESPIRATORY PERCUSSION.

Prof. DaCosta has published an article in the *Amer. Jour. of Med. Science* (July, 1875) on what he terms respiratory percussion, by which he means percussion with the patient holding his breath in either full inspiration, or forced expiration. Under both of these conditions, the percussion note is found to differ from that elicited while the patient is breathing easily—that with full inspiration differing most, and this difference being most available in diagnosis. At the apices and infraclavicular region, a held respiration makes the sound (in a healthy person) more resonant, fuller, and *the pitch higher* ; and where the left side has normally a higher pitch, this disparity is preserved. This statement holds good, in a greater or less degree, with the whole chest, although below the region mentioned it makes the normal disparity between the two sides less apparent.

A full and forced expiration lessens the resonance, and lowers the pitch over the entire lung on both sides—this being more clearly made out at the upper part of the chest anteriorly. The increased resonance with raised pitch may be explained by the fact of the altered tension of the structures in respiratory percussion.

In *bronchitis*, where the secretions are very abundant, the breath sounds are often impaired, and the percussion note as well. The chest, struck while in full inspiration, gives exactly a normal sound. If, however, the disease has attacked the finer structures, and solidification is beginning, this manœuvre does not render the note fuller and more resonant. If the lung is merely collapsed, this method often gives an almost normal sound.

In acute lobar pneumonia, while nothing is learned during perfect hepatisation, as resolution begins, the note heard on forced inspiration is more resonant and pulmonary.

Where, in a case of slight solidification, there is doubt whether it be caused by local congestian or tubercles, respiratory percussion solves the question—the case of local congestion becoming normally resonant, that of tubercles not.

In *pleurisy*, "over the seat of plastic exudation of ordinary extent," "forced inspiration diminishes the slight dulness that exists." Over the seat of marked effusion, no change is effected in the percussion note. In instances of pleuritic effusion, where there is blowing respiration at the back of the lung, and "the question arises whether or not pneumonia co-exists," respiratory percussion (inspiration) answers that question for us. Over the lower part of the chest, the note is unchanged ; so is it if the dulness be due to pulmonic solidification from inflammation ; but if it be due to condensation of lung tissue from compression, "decided clearness takes the place of dulness." In cases of tubercular deposit, at the early time when prolonged expiration just begins to be heard, and ordinary percussion detects little or no change, respiratory percussion makes the change more marked, and in this way : it developes a dulness previously not existing, or it makes the resonance of the damaged lung only slightly greater, and raises the pitch, "but does not bring out the changes strikingly, as in the healthy lung.'

When ordinary percussion shows marked dulness, that on forced inspiration may show but little change, "except a slight rise in pitch, or the pulmonary resonance may be partly restored," and that in portions of lung still expansible and capable of function. Should in a given case this method fail, at a later examination, to show this restoration of resonance, or reveal it less than at a former exploration, it would be proof that real solidification had progressed.

Finally, in pulmonary emphysema, Prof. D. believes his method is invaluable as a diagnostic indication. "In marked emphysema, the excessively clear or vesiculo-tympanitic note is unchanged by percussion during the act of breathing ; when the emphysema is not so great, it is slightly changed."

TUMOURS OF THE SUPERIOR MAXILLA.

Dr. Ohlemann, of Bremen, furnishes (*Archiv. für Klin. Chirurg.*, xviii., 2, 1875) in tabular form the statistics of thirty-two cases of tumours of the upper jaw, where complete or partial resection was done. The entire jaw was removed fifteen times, and part of it twice, for carcinoma. Five sarcomatous tumours classed as giant-celled, three as spindle-celled, one as round-celled, and one as medullary, were operated on. Cylindromata twice required partial resection ; epitheliomata twice an almost complete resection ; an enchondroma once a total resection. Out of twenty total resections there were three deaths and seventeen recoveries, while of twelve partial resections there was no death. Dr. O. finds carcinoma is more frequent in middle and advanced life, and twice as frequent among men as women. He thinks the tendency to it is hereditary in some cases. The ultimate result of the cases of carcinoma was fatal after an interval of from one to three years, the disease recurring in the cicatrix. Still he considers that the operation should be undertaken in these cases, provided the disease be not so far advanced as to make it impossible to separate the diseased from healthy tissues. In cases of epulis, the operation, with Liston's forceps, has in all cases resulted in cure. The operation itself was generally performed with the patient sitting up, the head supported on the breast of an assistant, and it was remarked how well such a severe operation was borne. The incisions in the skin had to be variously modified in view of the size and situation of the tumour ; but it was found that some disfigurement was unavoidable. The only exceptions to this were in two cases where the tumour grew in the direction of the nasal cavity, when Dieffenbach's incision was made use of with the best results, and in some cases where the growth sprang from the alveolar process, and no wound of the skin was required in its remoual. Liston's bone forceps were used for detaching the jaw from its bony connections, and Langenbeck's forceps for removing the loosened portions. After removal of all diseased tissue, the wound was filled with carbolised lint, and the edges united with sutures. In the after-treatment it was thought very important to prevent the flow of secretions from the wound into the mouth, through the opening left in the palate. Antiseptic solutions were therefore assiduously used so that pulmonary complications should not be set up. Secondary hæmorrhage was fatal in two cases, and erysipelas also occurred. Patients were usually able to leave the hospital, cured, in from two to four weeks.

ACTION OF ACONITE ON THE HEART.

In our last issue we gave Dr. J. Harley's views on aconitia. It is interesting to contrast with his the results of L. Lewin (*Centralblatt für Med. Wissens.*) :—

1. The anomalies in the heart's action which occur in poisoning with aconite do not have their origin in an affec- of the medulla oblongata.
2. The observed results, which are apparently contradictory, can be separated into two groups, both of which include a lesion of the nervous centres in the ganglia of the heart, and are distinguished by there being in one class an integrity of the pneumogastric nerves which does not exist in the other.
3. The integrity of paralysis of the vagi depends upon whether its intracardial terminations have been merely irritated for some time or actually paralysed.
4. This variation is entirely individual in character, and does not depend upon the poison.
5. The rhythm of the pulse which has been frequently observed is to be explained by the unequal and irregular action of the aconite on one or other of the cardiac centres, and this may be due to an unequal distribution of the poison in the blood.

THE ACTION OF SALIVA.

M. Petit recently communicated to the Société de Pharmacie de Paris the result of his experiments upon saliva. He had found that 1 gram of ptyalin had the power of dissolving from 10,000 to 20,000 grams of starch, producing a quantity of sugar varying between 3,500 and 7,000 grams.

BROMIDE OF LITHIUM.

The *Revue de Thérapeutique* gives the following as the results of Dr. Rouband's tests of this drug :—

1. Bromide of lithium is a drug which has a twofold action.
2. It possesses in a high degree the lithontriptic qualities which are universally recognised in the salts of lithia.
3. It affects reflex sensibility in a more energetic manner than the other bromides, without the unpleasant effects on the heart which the bromide of potassium has.
4. Consequently it takes its place in the first rank of antilithic and sedative drugs, and its action is especially valuable in cases of the uric acid diathesis, which are accompanied by painful phenomena, and in the neuroses which are so often associated with the presence of uric acid.

IODIDE OF STARCH AS AN ANTIDOTE.

Professor Bellini, of the Florence Institute, has lately submitted to the Royal Medical Society of that city a memoir (which appears in full in the September number of *Lo Sperimentale*) in which he recommends iodide of starch as an antidote and eliminant. As an antidote it is first of all of value in poisoning by sulphuretted hydrogen and other sulphur compounds—alkaline and earthy, also in poisoning produced by caustic alkalies and ammonia, but in these cases it should only be used until acid drinks can be procured. In the next place it is recommended in poisoning by those alkaloids to which tincture of iodine has been considered an antidote; the iodide of starch is far less irritating. As an eliminant, Prof. Bellini says it may often be used instead of iodides, bromides, chlorides, and alkaline hyposulphites to remove mercury or lead from the system. It is not to pretended to be superior to these but is more agreeable to take, and perhaps as effective. Children will readily take it in the form of syrup. When used as an antidote it should be followed, at a proper interval, by an emetic.

VARIETIES OF BRONCHOCELE.

Dr. St. John (*N. Y. Medical Journal*) describes the following varieties :—

The *follicular* variety may be known by its soft feel, by its limited extent being confined to lobes and lobules, and (if of long standing) by softening in spots to fluctuation, and therapeutically by its susceptibility to iodine. It affects more frequently the lateral lobes.

The *fibrous* form is hard and nodular, but has generally been softer at an earlier stage.

The *vascular* form has a soft feel, often pulsates expansively, may have aneurismal thrill, while the varicose variety may show the enlarged veins. The cystic and colloid are the largest variety—the colloid resembling the follicular, but softer, more symmetrical, of slower development, and sometimes gives crepitation; while the cystic gives fluctuation. Exploratory puncture gives albuminous fluid, and it may be unilateral.

Exophthalmic goitre is generally of medium size, and symmetrical. An essential characteristic of it is alteration of size in connection with relations to pregnancy, menstruation or mental conditions. It is essentially vascular in nature at first; after a time its structure may change and the gland become harder, and may even atrophy. Pregnancy will sometimes suspend all the disagreeable symptoms. The general circulatory derangements and constitutional weaknesses make the diagnosis as a rule quite easy.

BLOOD-CORPUSCLES.

Dr. Bassy, of the University of Bologna, has published an elaborate memoir, in which he endeavours to show that the red corpuscles of the blood, or at any rate a large number of them, are transformed into white, exactly contrary to the generally received opinion. Those which do not suffer this change, he thinks, are for the most part converted into a granular detritus; others form spherical masses colourable by carmine, and are the cells of Gluge; while a number of others not colourable by carmine are ordinarily known as giant-cells. In support of his opinion he passes in review the whole field of pathology.

TAYUYA: A NEW ANTISYPHILITIC.

It is stated in the *Bulletin Gén. de Thérapeutique* that while travelling in Brazil a gentleman named Ubicini found that some negroes used this remedy as an antisyphilitic. He procured some and gave to M. Stanislas Martin, who isolated from it a green resin, some yellow unctuous matter, and a very bitter, highly aromatic brown extractive; he also found tannin, starch, mucilage, volatile matter, magnesia, alumina, lime, iron, potash, and woody matter. The mineral substances are exceedingly abundant in this plant and are precipitated at once from a strong decoction.

INSANITY AND REVIVALS.

Dr. Geo. H. Savage, Assistant Medical Officer of Bethlehem Hospital, has collected the cases admitted into that institution during the four months of the "Moody and Sankey" services, and compared them with the admissions during the same months of the two previous years. There was an increase in the number of admissions during 1875, and three cases were thought to be traced to the excitement of the late revival, but Dr. S. adds :—

"I cannot say that I see grounds for supposing many cases were rendered insane by the recent revivals. Many persons were no doubt upset for a few hours, rendered very wretched, and for a time determined to lead a different life. The good done is not for me to discuss ; it may have been small or great, temporary or permanent ; in the majority of cases the storm was of short duration, and did little harm."

Dr. S. thinks that, though religious revivals do small harm to the able-minded, there is danger to those who are weak, but, of course, as much as this might be said of any cause of mental excitement :—A political event, a visit to the opera, a domestic annoyance, a quarrel, the reception of news—good or bad—and any mental excitement whatever may easily precipitate an attack of insanity in those predisposed to it, and it is a singular point that Dr. S. tells us the hereditary predisposition was rather well-marked in the cases of 1875, but in the other years there was only the ordinary percentage of hereditary taint. It would seem clear, then, that the revival could have little or nothing to do with the increased number of cases admitted to Bethlehem Hospital in 1875.

BRAINS AND INTELLECT.

"Great wits to madness are allied" said Shakespeare ; and Dr. Wilks has recently suggested that "it is the insane element which imparts what we call genius to the human race." This doctrine is very comforting to those who know that there is a taint of insanity in their family. Nevertheless, it is doubtful whether it is a partial expression of the truth. Certainly it is not the whole truth. We all know how wide-spread is the notion that a heavy brain is the index of intellectual power ; but this has been denied by accurate observers. An interesting contribution to the subject by Dr. Robert Lawson, Pathologist to the West Riding Lunatic Asylum, appeared in the *Lancet* of August 28th. Dr. L. quotes the recorded brain-weights of Dr. Chalmers, Daniel Webster, Sir J. Y. Simpson, Goodsir, Abercrombie, and Cuvier. All these, except the two last, he can balance by the recorded brain-weight of lunatics, and he remarks that the weights of brain in Abercrombie and Cuvier may be balanced by brains observed by Reid and Tiedemann. But although recorded facts do not prove that all men of great intellectual power have heavy brains, neither is the fact that heavy brains are found amongst lunatics alleged as proof that, *cæteris paribus*, large brains are not characteristic of mental power. Dr. Lawson relates some interesting cases observed at the West Riding Lunatic Asylum. His paper seems to support the notion that multiplicity of gyri is more characteristic than weight of intellectual capacity.

NITRITE OF AMYL IN SEA-SICKNESS.

Dr. Crochley Clapham recommends (*Lancet*, August 21) the inhalation of nitrite of amyl as a valuable remedy in that troublesome and often obstinate complaint—sea-sickness. He says that, in his hands, it has proved successful in 121 out of a total of 124 cases treated by it, there being "no return of the vomiting after the administration of the nitrite." Dr. C. says he pours three drops (more should not be given at a time) of the nitrite on a handkerchief and holds it *close* to the nose of the patient. The inhalation must be conducted rapidly, so as to give the full action of the remedy without a *too free* admixture of air.

Dr. Clapham says :—

"The action of the remedy in freeing the circulation and relieving the hyperæmia of the spinal cord will be quickly evidenced by a throbbing sensation in the temples (occasionally rather disagreeable) and by a more or less general flushing and increased warmth of the surface of the body. This warm and comfortable glow, which takes the place of the chilly sweat so disagreeable in this disease, is usually followed in the course of half an hour by a pleasant slumber, from which the patient wakes to eat a hearty meal. Should the sickness recur, which it may do after the lapse of twenty-four hours, the inhalation must be repeated. The patient should be in bed when under treatment, so as not to interfere with the subsequent sleep ; and I have usually judged it better to allow one fit of vomitimg to take place before applying the remedy, not only to ensure the *bona fide* character of the seizure, but also because I consider it advantageous unless the patient be in a very weak state of health."

Dr. C. says he only tried the nitrite after having previously run through all the more common methods of treatment. He says he found them all merely palliatives (and of uncertain action even as such), with the exception of Dr. Chapman's spinal ice-bags, with respect to which he says : "I can report favourably of their use in sea-sickness, when procurable ; but people will not or cannot provide themselves with these articles, nor will shipowners supply them in any number, and nothing can be more futile than attempting to treat twenty or thirty sea-sick people with one or two ice-bags."

Dr. Clapham says he only met with one case in which the patient refused to inhale the nitrite, on account of disagreeable effects, and that was in the tropics, where the patient complained that "it made him feel so hot he would rather be sea-sick."

PLUGGING THE POSTERIOR NARES.

This operation is one of the bugbears in surgery, therefore a simple method of performing it may be repeated without giving offence. It may not be anything new, but the ease with which it was performed in a case at the Bellevue Hospital, reported in *N. Y. Med. Record*, was certainly agreeable to the patient and pleasing to the surgeon. A small bougie having a bulbous extremity (a fine catheter may answer the same purpose) was introduced into the nostril to be plugged, and carried along the floor until it could be seen emerging into the pharynx ; this extremity was then seized with a pair of long forceps—which can usually be done without inconvenience to the patient—and brought forward through the mouth. A strong silken cord was then attached to it, and to the other extremity of the cord was fastened a pledget of lint. The bougie was then withdrawn from the nostril, and with it the string to which was attached the plug, and then this was drawn through the mouth, and quickly carried up behind the velum into the cavity for which it was designed. The operation gave the patient but little inconvenience, and the plug was to remain until the *natural secretion of the parts loosened* it sufficiently to permit a spontaneous removal.

IRRITATION OF BOTH PNEUMOGASTRIC NERVES.

L. v. Thanhoffer reports in the *Centralblatt* the result of compressing both pneumogastric nerves, one of his pupils having volunteered for the experiments. They confirm the statements of Ludwig, Hoffa, and others, that irritation of the vagus causes a diminution of blood pressure. The pressure was applied at the inner edge of the sterno-cleido-mastoid muscle on a line with the thyroid cartilage, and instantly gave rise to a prickling sensation, and to a marked sphygmographic trace. The experiments are scarcely likely to be continued, for, in the last, in which the patient made pressure himself, he became suddenly speechless, and it required considerable force to loosen his spasmodic grasp of his hand on his bent neck, and even then he did not at once become conscious. He was unable to stand for some time, then said his head was very heavy, and as if enclosed in an iron ring. There was a similar sensation about the heart, and to some extent over the whole body. A rigor, followed by pyrexia, ensued. He went to bed, slept well, and woke the next morning with a severe headache, which, however, soon passed off.

PHYSIOLOGICAL ACTION OF GELSEMIA.

Dr. J. Ott, of the University of Pennsylvania, who has previously published some careful researches on veretria and gelsemium, communicates to the *Philadelphia Medical Times* some new experiments; in which he employed the alkaloid gelsemia, and from which he deduces the following conclusions as to its action:—

1. In cold-blooded animals it paralyses first the sensory ganglia, and then the motor ganglia in the central nervous system. This order is reversed in warm-blooded animals.
2. It diminishes the pulse and pressure.
3. This decrease of pulse-rate is due to lessened irritability of the excito-motor ganglia of the heart.
4. The fall of pressure is due to diminution of cardiac irritability and vaso-motor tonus.
5. It decreases the respiration through a paralysing action on the respiratory centres.
6. It dilates the pupils.
7. It reduces the temperature.

GRAVE SCROFULIDES OF THE BUCCO-PHARYNGEAL MUCOUS MEMBRANE.

According to Dr. G. Homolle (*Thèse de Paris*, 1875, *Bull. Gén de Thérap.*, and *Philadelphia Medical Times*), lupus of the face is accompanied in one case out of five with lesions of the bucco-pharyngeal mucous membrane, and these parts should always be examined when facial lupus exists. These lesions may be derived from continuity in the region of the commissures of the lips or the nasal fossæ, or more frequently may occur in the mouth or throat without direct propagation. They may take the erythematous, ulcerative, tubercular, hypertrophic, or cancroidal form, the seat of the lesion having a marked influence upon the type which the disease assumes. Analogous affections may be primarily developed upon the mucous membrane of the palate, the isthmus, or the pharynx. They show themselves under two principal forms: lupus of the throat (progressive erosion) and ulcerating scrofulide (perforating ulcer). The latter coincides in certain young subjects with certain lesions which have been attributed to hereditary syphilis—notched teeth, interstitial keratitis, &c. These primitive scrofulides of the throat are usually affections of childhood. Their favourite seat is the velum palati, and after that the posterior wall of the pharynx; they scarcely ever appear on the tonsils. The disease is rarely propagated to the epiglottis, and still more rarely to the larynx.

The grave scrofulous anginas are observed in manifestly strumous subjects. Tardy hereditary syphilis is perhaps one of the causes of their appearance. The diagnosis is always difficult. Syphilis must be constantly borne in mind, and a very careful examination of both patient and history should be made before pronouncing an opinion. Lupus of the throat, with progressive erosion and posterior adhesions of the hinder half-arches to the vault of the pharynx, is more easily distinguished than ulcerous scrofulides from other forms of chronic angina. The treatment is anti-strumous, with local cauterisations.

THE PHYSIOLOGICAL ACTION OF LIGHT.

At the recent meeting at Bristol of the British Association for the Advancement of Science, in the Department of Anatomy and Physiology, the report of a committee appointed at the meeting of 1873 to investigate the physiological action of light, was read by Dr. J. G. McKendrick. The members of the committee were Professor Balfour (Edinburgh), Professor Dewar (Cambridge), and Dr. McKendrick (Edinburgh). The results arrived at by the committee are as follows:—

1. The impact of light on the eyes of mammalia, birds, reptiles, amphibians, fishes, and crustaceans, produces a variation amounting to from 3 to 10 per cent. of the normal electro-motive force existing between the surface of the cornea and the transverse section of the optic nerve.
2. This electrical variation may be traced into the brain.
3. Those rays that are regarded as most luminous produce the largest variation.
4. The electrical alteration is due to the action of light on the retinal structure itself, as it is independent of the anterior portion, eliminating, therefore, the natural supposition that the contraction of the iris might produce a similar result. It is possible by experiment to discover the physical expression of what is called in physiological language "fatigue."

INTESTINAL SECRETION.

At the annual meeting of the British Association for the Advancement of Science, a second report was presented by the Committee on Intestinal Secretion. The committee considered that the experiments they had made proved the absence of influence on intestinal secretion through the splanchnic nerves, the pneumogastrics, the sympathetic above the diaphragm or the spinal marrow; and the probable influence of the ganglia contained in the solar plexus, though certainly not of the two semilunar ganglia exclusively. Also the independent occurrence of hæmorrhage and of paralytic secretion appeared, in the view of the committee, to point to a separate nervous influence on the blood-vessels and the secreting structures of the intestines.

THE NATURAL HISTORY OF DYSENTERY.

Professor Austin Flint, who was the first to study the natural history of acute rheumatism, his cases having preceded those recorded in "Guy's Hospital Reports," has furnished another contribution to the natural history of disease. His new article, which appears in the *American Journal of the Medical Sciences* is devoted to acute dysentery, and gives a report of ten cases observed without medicinal treatment. The practical conclusions drawn from the study of these cases by Dr. Flint are as follows:—

1. The disease, in a temperate latitude, tends, without treatment, to recovery.
2. It is a self-limited disease, and its duration is but little, if at all, abridged by methods of treatment now and heretofore in vogue.
3. Convalescence is as rapid when active measures of treatment have not been employed, as in cases actively treated.
4. Relapses do not occur in the cases in which the disease has been allowed to pursue its own course without active treatment.
5. Sporadic dysentery, in a temperate climate, does not eventuate in a chronic form of the disease; in other words, it does not lead to ulceration or other lesions of the mucous membrane of the large intestine, and it does not involve any tendency to complications or secondary affections.

CARDIAC INTERMISSION.

An important contribution to the history of this symptom has been made by Dr. L. Lereboullet (*Gazette Hebdomadaire*).

1. The best characterised cardiac intermittences, the most painful to the patient, those accompanied with symptoms which indicate that many organs which derive their innervation from the pneumogastrics, are affected

simultaneously with the heart, are frequently met with when there does not exist any organic lesion of the central organ of the circulation.

2. Cardiac intermittences, which depend upon a primary or secondary alteration of the myocardium, are most frequently indolent. They are almost always accompanied with acceleration of the pulse. They follow arythmic derangements termed inequalities or irregularities. They are almost always preceded by *faux pas* of the heart.

3. We may, nevertheless, in certain cases, as at the commencement of an endocarditis, or when the organic disease of the heart is not yet revealed by any stethoscopic sign manifesting itself, subsequently observe cessation of the heart beats, which proves that the cardiac plexus at the commencement of organic lesion is much more impressable than in its physiological state.

4. The symptom of *intermittence* then, in itself, and as a means of diagnosis of diseases of the heart, has but small significance, especially if the intermittences are isolated, transitory, and if they may be referred to one of the causes previously enumerated. This symptom acquires a real value only when the intermittences occur with frequency, and are joined to symptoms which may lead to a suspicion of lesion of mitral valve.

5. Cardiac intermittences may accompany the most varied pathological conditions. It is not necessarily indicative of general or serious derangement of health.

WIND INSTRUMENTS IN CHEST AFFECTIONS.

M. Burq maintains in an interesting *brochure* that musicians who play wind instruments are less liable to chest affections than the general population. This notion, though opposed to that of the populace, will not seem unnatural to those medical men who remember that the late Dr. Ramadge had great faith in the use of an inhaler which rendered expiration slower than usual.

OIL OF BLACK PEPPER.

From a report of the Roosevelt Hospital in the *Medical Record* (N. Y.), oil of black pepper would seem to be a favourite remedy. In the aphthæ of phthisis the following solution is applied with a brush :—

Quinine or morphine (the sulphate), 1 grain ;
Oil of black pepper, 1 drop ;
Water, 1 ounce.

For follicular pharyngitis, a spray of oil of black pepper and salt water : strength, a teaspoonful of table salt to one pint of water, the oil being added in the proportion of one drop to the ounce.

MONOBROMIDE OF CAMPHOR.

At a late meeting of the Academie des Sciences de Paris, Prof. Wurtz exhibited magnificent samples of this drug, prepared by Dr. Clin, by the direct action at 100° C. of bromine upon camphor without pressure and without distillation. He also presented a note of Dr. Bourneville's on the physiological and therapeutical action of the drug. Dr. B. finds—

1. It diminishes the number of the heart beats and causes a contraction of the auricles.
2. Diminishes the number of respirations without interfering with the rhythm.
3. Decreases the temperature.
4. Possesses sedative properties.
5. Does not disturb digestion, but its prolonged use brings on, at least in cats and guinea-pigs, rather rapid emaciation.

RHEUMATIC TETANUS.

Dr. F. Franzolini relates in the *Giornale Veneto di Scienze Mediche* a case of tetanus arising from exposure by sleeping on the damp ground after great fatigue, successfully treated by prolonged warm baths and the continual use of chloral and morphia. The chloral was given frequently by the stomach, and the morphia by subcutaneous injection. The first bath was for six hours, at a temperature of 40° C. (104° F.), and subsequent ones lasted 5, 4, 3, or 2 hours. This treatment was carried out from the 18th to the 30th of the month ; but the daily use of chloral and morphia was continued some time longer. Of the first 90 hours of his disease the patient passed 48 in the bath at 40° C. In 29 days he consumed nearly 4 ounces of chloral hydrate, and about 22 grains of hydrochlorate of morphia were injected. Although kept so long in a state of almost constant narcotism, the mental powers of the patient were in no way affected.

THE STOMACH-PUMP IN DISEASE.

In various diseases, especially of the stomach, the stomach-pump has been freely employed in Germany, especially since the publication of Kussmaul's elaborate work, who obtained excellent results in cases of dilatation by regularly and completely emptying the stomach every day by means of the pump.

Dr. Schliep, of Berlin, has employed this treatment in seventy-four cases of stomach disease, the pump being employed altogether 982 times. In some cases, however, two or three applications sufficed for the cure. Dr. Schliep examines the reaction of the contents of the stomach and their microscopic appearances, which he thinks afford important indications, and he also introduces a number of medicaments by means of the pump for the sake of their local action upon the mucous membrane. His article (*Deut. Archiv.*) contains details of seventy-four cases.

MEMBRANOUS SORE-THROAT.

M. Lebert recommends in *l'Abeille Médicale* the use of ice in membranous sore-throat, and when there is much coryza, washing out the nares twice or thrice daily with cold water by means of an ear syringe, which may for this purpose be filled two or three times on each occasion. The many cases in which the disease commences by coryza lead him to think that the disease is frequently propagated by continuity of surface. He relates the case of a little boy, three years old, very rapidly cured by the means proposed.

RHEUMATIC PLEURISY.

According to M. Lesègue, this variety is easily distinguished by its extent, intensity, and persistence at the point of the side first attacked, and he considers it very important that the distinction should be made. Rheumatic pleurisy attacks principally the parietal layer of the pleura and the fibrous, subcostal, and intercostal tissue, giving rise to irritation of the adjacent nerves, and hence to the severe pain excited by the least movement of the thoracic walls—pain exactly similar to that caused by the movements of a joint affected with acute rheumatism. The fact is, the parietal pleura, like the synovial membranes, rests upon white tissue, ligamentous or tendinous, and it is this tissue which rheumatism is so prone to attack. M. Lesègue, according to *l'Abeille Médicale*, has also observed attacks of pleurisy alternating with the joint affection in the course of rheumatic fever. Rheumatic cases are more favourable than others, which mostly attack the visceral pleura and give rise to complications accordingly.

ANIMAL HEAT.

At the French Association for the Advancement of Science, M. Claude Bernard addressed the Medical Section on the subject of animal heat. By different persons the seat of animal heat has been placed in the lungs, the capillaries, the muscular tissue, &c. According to M. Bernard there is no single centre, but it is produced in all parts. He finds, contrary to a generally received opinion, that the venous blood is warmer than the arterial. In the capillary network, the seat of constant oxidation, is the part where heat is produced. From other researches he concludes that fever is a purely nervous phenomenon; that there are vaso-motor nerves of two kinds, viz., dilators and constrictors. Fever is the result of profound modifications of this system giving rise, as its principal effect, to elevation of temperature.

OVARIOTOMY IN A GIRL OF THIRTEEN—ADVANTAGEOUS EMPLOYMENT OF THE STOMACH-PUMP.

The patient had already menstruated for three months when the abdomen began to enlarge. Prof. Koherle diagnosed a multilocular cyst of the right ovary, and operated about one month ago. A small incision was made, the various cysts were punctured, and the tumour withdrawn without difficulty, as there were no adnesions. All went well until the eighth day, when gastric derangement began, with sour eructations, vomiting of green matters, pulse 120, temperature 103·1°, great thirst, dry skin. By means of the stomach-pump gas was removed from the stomach and water injected. This was repeated at intervals of 10, 15, and 20 hours, with the very best results. The patient, after several other complications, such as abscess in both ears, bleeding at the nose, &c., finally made a good recovery.—*Gazette Médicale de Strasbourg*, Sept. 1, 1875.

KEPHALHÆMATOMA NEONATORUM.

Dr. Gassner (*Ærzliche Intelligenzblatt*, No. 32) relates a very successful case of kephalhæmatoma neonatorum, which resisted several kinds of treatment, but ultimately healed perfectly, when evacuated, under carbolic spray and treated antiseptically. The evacuation was effected by means of a hollow needle, and the periosteum was found to be stripped from the bone.

THE TREATMENT OF CHOLERA.

Dr. Redenlacher (*Ærz Intelligenzblatt*, No. 27, 1875) observes that as the prominent symptom of cholera is the profuse transudation of serum from the capillaries of the stomach and intestines, and consequent alteration of the blood, it is desirable to employ such means as will check or diminish the transudation by stimulating the contraction of the dilated and overcharged capillaries. Experiment has proved that ergotin can stop capillary hæmorrhage by causing the capillaries to contract, and we are justified in assuming it will produce similar effects on the capillaries of the digestive tract. It can best be administered subcutaneously. Morphia is also of use to check the peristaltic action of the intestines and relieve muscular spasm. Ice applied externally will also help to effect contraction of the gastric and intestinal blood-vessels. Against the great depression of the vegetative nervous system, and especially of the cardiac nerves, he recommends the subcutaneous injection of liq. anodyn. Hoffman., ether, sulphur, or ol. camphor, each of which he states, when subcutaneously injected, can invigorate the heart very rapidly.

THE DANGERS ATTENDANT ON LONG-CONTINUED USE OF IODIDE OF POTASSIUM FOR GOITRE.

Dr. G. Deiningen relates some cases (*Ærz. Intelligenzblatt*, No. 26) in which the use of iodide of potassium, though remarkably successful in reducing the size of the goître, entailed, whether directly or indirectly he does not distinctly say, very serious consequences. Derangement of the nervous system, emaciation in spite of ravenous appetite, dilatation of the heart, with restlessness and other symptoms, have many times been observed in such cases; but whether they are due to what is called iodism, or to the rapid resorption of recrementitial substances, is a question deserving careful inquiry, Dr. Deiningen inclining rather to the latter view. The fact that large goîtres often disappear with young people without producing any apparent ill effects is apparently opposed to this; but Dr. Deiningen thinks it probable that in older people and old-standing goîtres the normal and newly-developed glandular structures may be infiltrated with a colloid substance, which, when absorbed into the blood-vessels, acts as a foreign body and produces the bad effects mentioned. The prognosis is generally favourable, but must be pronounced with caution. In young and favourable cases three to four months, in older cases almost twelve, are required to bring about convalescence. No means of directly treating the affection is known. The symptoms will last until the toxic agent has been removed. Everything that will promote vigour and encourage appetite and digestion will therefore be beneficial. The paper is a serious warning of how careful one should be in pushing active treatment by iodine compounds in cases of goître.

JOTTINGS FROM JOURNALS.

Acne.—M. Lailler follows Hebra in the treatment of this troublesome affection. Every evening, for four evenings, the face is smeared over with black soap, in the morning this is removed with tepid water. Then, during four consecutive days, a warm vapour douche is directed upon the features. Afterwards, the black soap smears are resumed, then the douches, and so on alternately for a period of six weeks, after which the malady, if not entirely removed, is very sensibly mitigated.—*La Presse Médicale Belge.*

Varix.—M. Rigault's treatment for the radical cure of varicose dilatations of the spermatic cord and of the veins of the extremities has received much attention on the Continent, and seems well to deserve the careful consideration of British practitioners. His first operations, in which he exposed the vein, which was then cauterised with the Vienna caustic, are described in M. Pruner's thesis, sustained at Strasburg in 1851. This method M. Rigault afterwards gave up, but having observed that the veins shrunk very considerably when exposed to the atmosphere, he was led to employ their simple exposure without cauterisation. The vein is simply laid bare, then isolated from the contiguous tissues by a bit of black riband, a piece of diachylon, or an india-rubber sound. About the seventh day or so the vein is commonly found dried up, in fact obliterated, gives way, after which the parts heal rapidly. He describes 160 cases in which this procedure, which otherwise exempt from all danger, was resorted to, namely 140 cases of simple varix of the lower extremities, and 19 of sarcocele, followed by perfect success. In one of the cases, the internal vena saphena was implicated, with severe phlegmon and other serious complications; he had hardly ventured to hope for success, but the termination proved quite as happy as in the other instances.

Chorea.—The Paris medical journals relate that Dr. Bouchut has administered from 2 to 5 milligrammes of the sulphate of eserine, at one time in pills at another in subcutaneous injections, usually with success after nine or ten days' treatment. The little patients experienced more or less malaise, but this subsided in about an hour.

Deviation of the Vertebral Column.—By dint of orthopædic treatment, in various cases of spinal gibbosity, coupled or not with chicken breast, Drs. Pravaz and Bouvier obtained marked success in from one to two years. Dr. Pravaz comments on the popular prejudice that spinal deviation goes away of itself as the subject grows older, This however is not true. He makes the curious and important remark, that a large deviation, as implicating a greater number of the vertebræ, each to a relatively less extent, is not so difficult to deal with as when the deviation is more circumscribed.—*Lyon Médical.*

General Paralysis.—Dr. Paterson, in an address in Glasgow, comments on the occasional production of general paralysis as following upon and sequential to habitual toping. He most justly and cogently observes that those who are not capable of firm and habitual self-restraint ought not to drink at all. Without a doubt habitual drinking to excess is potentially productive of every evil, moral and physical. And medical men have so much influence that they cannot too earnestly or too universally set their faces against this truly beastly vice.—*Medical Temperance Journal.*

Obstinate Constipation.—It ought to be universally well-known that copious injections of water into the rectum prove, very often, a safe and efficacious remedy in this serious affection. Dr. Battey, an American practitioner, mentions two instances in which, he states, 24 pints of water were actually, in this way, severally thrown up. The water is found to pass beyond the ileo-cæcal valve. Dr. Battey avers, and the writer of these remarks is able to corroborate his averment, that the fluid in some cases went so high as the stomach. The subject has attracted attention in Italy as well as elsewhere. Drs. Trastour and Jatté, it is well to mention, the former in three cases, one of invagination the other two from fæcal accumulation, have realised results equally favourable.—*Rivista Clinica di Bologna.*

Hydrophobia.—Dr. O. De-Stefano relates three instances of persons bitten by the same rabid dog. The first case was that of Napolitano Rosa, a man about sixty years old. Holding up his right hand in a vain effort at self-protection, the rabid brute bit him severely on the back of the hand. De-Stefano was fortunately in the apothecary's shop where the bitten man had at once applied for relief. De-Stefano immediately had recourse to pledgets of lint dipped in liquid ammonia, having first washed the wound thoroughly. When they became dry, other pledgets, similarly moistened with liquid ammonia, were substituted for the first. In ten days the wound was quite healed.

The second case was that of Antonio Capiraso, about ten years old, bitten by the same dog in the left leg as the animal was rushing along the same street. Dr. De-Stefano treated the boy precisely as he had treated the man, and with a like result.

The third case was that of Teresa Napolitano, a widow of sixty, who was also bitten by the same rabid animal. The poor woman, unaware of her great peril, sought for no advice or treatment, and consequently received none. After the lapse of six months, symptoms of hydrophobia, as well marked as possible, symptoms which it is needless further to particularise, appeared. On the 1st of October, preserving her intelligence to the last, but suffering most acutely, the poor woman perished. These cases certainly appear deserving of the utmost attention, and they are recorded in the *Gazzetta Medica Italiana*, Padova, 10 Luglio, 1875, page 221.

Viper-bite.—Vipers are a great nuisance in Italy, biting and destroying men and animals. In one locality, the grounds of a villa were so infested that the place was rendered uninhabitable until a drove of pigs, which made short work of the vipers, had been introduced. When these unpleasant quadrupeds were dismissed, the vipers returned in force as before. We all remember the fatal case of the keeper at the London Zoological Gardens, who was bitten in the face by a viper. In many parts of Scotland vipers are both dangerous and troublesome. An interesting case is recorded in the Italian medical journal *Il Morgagni*, for February, 1875, by a contributor who signs himself "C." The case was that of a boy (*ragazzo novenne*) who had been stung by a viper on the preceding day, while picking up a mulberry. The arm was enormously swollen and discoloured, while the little sufferer complained miserably. "I really did not well know how to impart relief," said the narrator, "but I exhibited ammonia in suitable doses internally, with little or no benefit. On going home," he continues, "I saw lying on my table No. 36 of the *Berliner Klinische Wochenschrift*, and in the table of contents an article headed 'On the Treatment of Serpent-bites by means of Subcutaneous Ammoniacal Injections.'" The narrator then proceeds to mention that he immediately returned to the house where his patient lay, fortunately not remote, filled an injecting syringe with liquid ammonia 1 part, distilled water 4 parts, and threw the mixture through a suitable cutaneous puncture made in the hollow of the axilla. The child complained much of the pain, but this was allayed by compresses dipped in ice-cold water. On returning in the evening, the vomiting, which was very urgent, had quite ceased, the swelling of the bitten parts was somewhat abated. The following day the local suffering was still very considerable, but on the day after the little sufferer received his physician with smiles, and, in short, made a progressive and capital recovery. C. was so much impressed with the fortunate issue of the little boy's case that he will have recourse, he says, to subcutaneous ammoniacal injections not only in venomous snake-bites, but also, whenever he happens to encounter them, in cases of glanders, hydrophobia, malignant pustule, septic poisoning, and cadaveric infection, convinced that few, if any other remedies, will prove equally successful.

Mecca.—Dr. Buez relates that actually during the one month of February, 1875, some 50,000 pilgrims, proceeding through Djeddah, had visited the tomb of Mahomet, and during the year 150,000 in all. These fanatics, for the most part, crowded together as they are, and suffering from every species of privation, are the source of extreme danger, not only to themselves, but to Europe, Asia, and Africa also, spreading the plague when infected in every direction, suffering themselves and communicating this destructive malady to others. — *Gazette Médicale de l'Algerie.*

TOPICS OF THE TIME.

QUININE.

Recent Researches on its Action—as a Febrifuge—as an Antizymotic—on the Heart—on the Muscular System—on the Nervous System—on the Alimentary Canal — on the Uterus and Non-striated Muscular Fibre. Recent Clinical Records of its Use in—Pneumonia—Croup—Whooping-Cough—Phagedæna—Erysipelas—Diphtheria, &c. New Modes of Administration, and New Preparations — Intra-Tracheal Injection — Hypodermic Plan—Bromide—Sulphophenate—Salicylate.

We know of no subject on which greater differences of opinion prevail than that of the action of quinine. Experiments carefully conducted and facts accurately observed lead different men to diametrically opposite conclusions; but there are also other sources of confusion. Now and again alleged facts turn out to be no facts at all, and others which appear at first sight indisputable cannot be reconciled with those equally trustworthy. We do not refer exclusively to what are termed clinical facts, for physiological experimenters seem quite as much at odds among themselves as clinical observers. We have before us quite an array of recent writings on the subject which we propose to examine. It is not our purpose to attempt to reconcile their contradictions. It will be sufficient to report the chief statements made, and to confine our own comments to a few obvious criticisms. Thus we shall render our readers *au courant* with the literature of a subject which seems to be inexhaustible.

According to some, the action of quinine would seem to be almost universal, while others would restrict its effects to one or two tissues of the animal body. One sees in it an agent acting directly on the nervous system; another, on the vaso-motor; a third, on various organs, the chief of which is the heart; a fourth, on the blood; a fifth, on the white blood corpuscles; a sixth, on the minute vessels; while a seventh ascribes to it an inexplicable antipyretic power.

ACTION OF QUININE.

Quinine undoubtedly depresses the circulation, and this fact was well known to Giacomini half a century ago, although it is claimed as a recent German discovery. This Italian physician, by experiments upon animals, upon healthy men, and upon himself, as well as by observing its effects in various diseases, came to the conclusion that quinine constantly reduced the temperature as well as the frequency of the heart-beats, and of respiration.

As a febrifuge, Liebermeister has pronounced it the universal antipyretic, and the German school plumes itself upon having demonstrated this fact, having apparently quite forgotten that years before Torti had pronounced bark *antipyreticorum facile princeps.* Prof. Coletti lately submitted to the Academy of Padua a memoir, published at length in his able "Gazette," in which, having passed in review many facts and theories, he concludes that of all the various virtues attributed to quinine, its most ancient traditional empirical renown as an antiperiodic is that which remains the most incontestable, although the most recent researches fail to afford any explanation of the fact. He observes, too, with satisfaction, that the antipyretic and antiphlogistic power long ago attributed to it in Italy is becoming more generally admitted, while as to its antiparasitic, antizymotic, and antiseptic influence, although many interesting facts have been collected and useful applications made of them, they are still surrounded with many great difficulties.

The so-called antizymotic properties of quinine, so largely insisted on by the German school since the publication of the experiments of Binz, previously alluded to in THE DOCTOR, are by no means universally admitted. Dr. Bochefontaine has repeated Binz's experiments, and indeed extended them, with directly opposite results. In a weak solution (1 in 800) of the salts of quinine he found that bacteria, vibrios, &c., were not only not destroyed, but their development in such solutions took place with great facility. Moreover, in frogs poisoned by quinine their development was not prevented, but, on the contrary, was easily promoted. He also declares that quinine has no power whatever over the amœboid movements of the leucocytes, exactly contrary to the statements of Binz and his followers. M. Collin is also in opposition to the German school, for in the *Bulletin Générale de Thérapeutique* he concludes that from three kinds of proof based on clinical observation, experimental pathology, and the direct action of quinine on decomposing vegetable substances, it results that the therapeutic action of this drug is altogether foreign to any antizymotic or antiseptic power, and to any immediate influence over marsh miasmata. Again, Sylvestris, as the result of a series of experiments and clinical observations which confirm the generally received opinion that quinine is a true specific for malaria, confesses (*Il Morgagni*) that the most recent chemical and microscopical investigations are quite incapable of rendering our use of this agent other than empirical.

With regard to the action of quinine upon the heart, Pereira, Trousseau, Schlokow, Eulenburg, Lewitzky, and a host of others have recognised its restraining power, and some of them have shown that this power is perceptible after section of the pneumogastric and the sympathetic, and appears to be due to the direct action of the quinine upon the motor ganglia, the cardiac vessels, and perhaps the muscular fibre of the heart itself. Some have even gone so far as to declare that quinine more than digitalis deserves the title of "the opiate of the heart," and in our own practice we have come to the conclusion that, on whichever tissue it may act, clinically it is a true cardiac sedative.

The action of quinine on the muscular system has been lately investigated with great care by Dr. Chirone, whose researches are being published in *Lo Sperimentale.* His experiments lead him to conclude that quinine exercises an important chemico-biological action upon the voluntary muscles when applied to them directly, but that when it reaches them only through absorption into the system, it alters neither their irritability nor their electro-motor power. This local biological action is not to be understood in the sense of Gubler, as vaso-motor, but instead, according to Chirone, the local circulation assisting the absorption of the quinine merely permits a more complete chemical action between it and the albuminoids of the muscle. It may be remarked that muscular rigidity produced by the local action of quinine has been observed in man by Prof. Semmola, who found after a number of hypodermic injections in a young lady that the arm in which the operations were made became completely rigid—a fact which Chirone explains by the extent of contact obtained through the multiple injections. Chirone's experiments further show that quinine exercises a powerful influence over the heart. A frog poisoned with the drug is able to leap or jump a considerable time after the heart has been arrested in full diastole.

But the nervous system. Is it not through its influence on this that all the other phenomena are produced? Not a few have adopted this idea. We have already called attention to the experiments of Drs. Hammond and Roosa, of New York, which tend to show that quinine produces congestion of the brain, of the meninges, and of the organ of hearing; and although this has been denied, it seems very difficult to refuse to credit it, considering that under the influence of a full dose we may often see hyperæmia come on in the optic disc and the membrana tympani —a fact which would explain some of the symptoms we constantly meet with. To this we may add that Prof. Jakubowicz, of St. Petersburg, has produced in dogs by poisonous doses of quinine convulsions closely resembling epilepsy as seen in man.

Heubach has lately repeated Eulenburg's experiments with very different results. He says that with small doses reflex excitability is not diminished, but rather increased; with larger doses it is at first increased and afterwards diminished, but the latter effect he thinks may be due to paralysis of the heart, which Kölliker, Hitzig, and Heubach himself have shown will interrupt reflex excitability; in very large doses this excitability is rapidly destroyed and the respiration as well as the heart paralysed. Here we should add that Heubach declares that the cause of death in quinine-poisoning is not, as generally supposed, due to its effect upon the heart, but to its power of paralysing the respiration, so that he has been able to prolong life by means of artificial respiration. By this means he has kept the heart beating two and a half hours after the first suspension of breathing.

Dr. Fred. D. Lente, in a paper on "The Neurotic Origin of Disease," read before the New York Neurological Society, observes that we can only explain the action of quinine by its influence on the nervous system. He thinks there is nothing which warrants the opinion so generally diffused that it has any modifying influence on the blood, or any antidotal effect against supposed germs, either vegetable or animal, but he admits that its action on the vessels is not so well settled. It is singular, he says, that Binz and others, when noting the effect of quinine on the contents of the vessels, made no note on the condition of the vessels themselves.

From his paper we learn that Dr. G. R. Cutter has informed him of some experiments made in Arnold's laboratory, Heidelburg, on dogs, rabbits, and frogs, the retinal vessels being measured before, during, and after the administration of quinine. A gradual but marked diminution of the arteries took place. Before death they became mere threads; the veins were also diminished in diameter; the animals often became blind; and the retina was anæmic in the highest degree. Inflammatory dilatation was lessened, and the wandering of the corpuscles retarded.

Much difference of opinion has prevailed as to the action of quinine on the alimentary canal. Bretonneau declared it to be a purgative, and that nine grains was always sufficient to produce that action; he therefore recommended its combination with opium—a practice that many have adopted. Some have gone so far as to consider it a true irritant of the intestines. Trousseau and Pidoux describe it as stimulating the peristaltic action sufficiently to produce purgation, and observe that this fact is at variance with the depressing action which they attribute to it upon the apparatus of organic life. Chirone denies this action altogether, as do many others, and think it more likely to produce constipation. We are certainly inclined to think, from clinical experience, that large doses do frequently give rise to intestinal disturbance, not indeed to true serous diarrhœa, but to griping and irregular action of the bowels, such as might perhaps be readily explained by spasmodic peristaltic movements, and in support of our opinion we may remark that numerous experiments seem to show that the peristaltic movements are greatly increased in animals poisoned hy quinine.

We have several times had occasion to mention the opinion of Monteverdi, that quinine exercises a remarkable exciting effect on the uterine muscular fibre, and is capable of supplanting ergot as a stimulant of that organ. This conclusion has been denied by other observers, who report that the drug is destitute of the alleged property; but Monteverdi has many supporters, and he declares that the effect of quinine extends to the intestines, the bladder, and to all the blood-vessels containing a muscular coat. In fact, he regards it as a stimulant of non-striated muscular fibre wherever situated. Acting on this idea, Dr. Deneffe has employed quinine in inflammation of the retina and of the optic nerve, the vessels of which are enveloped with non-striated muscular fibre, and he declares that he has been able to watch with the ophthalmoscope this effect of the drug on the inflamed tissues. Dr Secondi, of Genoa, reports a case successfully treated in the same manner. Dr. Melchiori has extended the use of the drug to all kinds of hæmorrhages. In one case of epistaxis which had resisted all treatment for more than a year, and in which the losses of blood were frequent and abundant, a rapid cure was obtained by the use of sulphate of quinine. At the Société de Thérapeutique de Paris Drs. Barthez and G. de Mussy both admit the stimulating action of the drug upon the contractility of blood-vessels, though they do not believe in its power of influencing the uterine fibres. A similar conclusion has been reached by Dr. Cassterman, and reported by him to the Société Médicale de Gand.

Dr. Albert H. Smith concludes a paper (*Obstetrical Journal*) on "Quinine as a Stimulant to the Pregnant Uterus" as follows :—

1. That quinia has no inherent property of stimulating the gravid uterus to contraction, being inert as to any effect upon the womb in a quiescent state, and having no decided action in accidental labours at any period of gestation.
2. That to its property as a general stimulant and promoter of vital energy and functional activity, and to that alone, is due its influence upon the uterus in normal parturition, producing then no action peculiar to itself, but merely increasing the power of the uterus to expel its contents by its own natural method, converting what is a defective or even pathological action into a simple physiological process.
3. That by availing ourselves of this power, we may, by administering full doses of sulphate of quinia at the onset of labour, favour the rapid and safe termination of what might otherwise be a tedious and exhausting work.

RECENT CLINICAL USES OF QUININE.

In the "Transactions of the Ohio Medical Society" Dr. S. S. Gray relates some cases of pneumonia treated by quinine, which he has also successfully used in croup, giving it with as much confidence as in intermittents. He adds cases of asthma, hæmoptysis, and threatened phthisis arrested by quinine, saying that although he could not expect to cure a case where there were extensive tubercular deposits, he believes that tonic treatment, with quinine and iron for its base, will relieve much suffering, and give the patient the best chance of recovery.

Dr. J. W. Keating advocates in the *Philadelphia Medical Times* the treatment of whooping-cough with *quinine.* In one case, at the close of twenty-four hours, half a grain of quinine being given every hour, Dr. K. states that the paroxysms of coughing had diminished in frequency exactly *one-half.* This experiment was often repeated with the same results, until at the end of a week, at which time the paroxysms were very few, but had not diminished in severity.

In another case, a girl 15 years of age, suffering from a severe attack of pertussis, the result "was truly wonderful." After the first day there was very little cough, and in less than two weeks the disease had entirely disappeared. The conclusions to which Dr. K. arrives are as follows :—

1. That in most cases quinine given in solution will diminish the frequency of the paroxysms of whooping-cough, provided it will be given in sufficiently large doses.

2. That quinine can be given to children in proportionally much larger doses than to adults, but that in very young infants it is contra-indicated, as it always causes vomiting.

3. That carbonate of ammonia will in almost all cases relieve the severity of the paroxysms, and consequently should be given in conjunction with quinine, when this indication for its use exists.

4. That the dose of quinine for a child of 2 years should be at least ten grains daily, in divided doses ; it should be watched carefully, and increased if it produces no effect. For a child of 12 years, he advises, to begin with fifteen grains daily, and note the effect of each dose. The drug, he states, should be frequently discontinued for a day or so, as it seems to lose its effect.

Dr. Edward T. Bruen, in the same journal, says that in many cases, if the drug is used continuously, it either signally fails to relieve, or else it affords but slight benefit. The proper method is to administer it by rapidly-increased doses for a period not longer than five days, after which it should be stopped, and after an interval, if necessary, recommenced.

If at any time during the twenty-four hours the paroxysms are especially violent, it is a good plan to administer the quinine at such intervals that a full dose shall be given one hour or two before the spell is expected. To accomplish good, he says, the medicine must be pushed to a quantity equal to a full antiperiodic adult dose. To a child under 3 years old at least ten grains should be given in twenty-four hours ; to one of 12 years, from sixteen to twenty grains in the same time. It is only by using these full doses that good can be accomplished or cures made.

In many instances he has seen it cut down immediately the number of the paroxysms from forty or fifty daily, as registered by pin-holes in a card, to only eight or ten ; the case afterwards rapidly recovering similarly to those which have run their full course. In more rare cases it is positively curative ; but the great relief afforded is amply sufficient to make us employ it when other means are so constantly ineffectual.

He has seen only a few cases where unfavourable symptoms appeared during the treatment ; one child of 14 months, who had taken ten grains of quinine for two days, manifested symptoms of congestion of the brain, which yielded promptly to treatment, the disease being also cured. In one or two other cases a little drowsiness and headache were the only unfavourable symptoms, but these effects came on gradually.

In the new volume of the "St. Thomas's Hospital Reports" Mr. John Croft relates some cases of serpiginous and phagedænic ulcerations, both syphilitic and non-syphilitic, in which considerable benefit appeared to accrue from the use of sulphate of quinine, after iodide of potassium had been given for a considerable time in large doses without much improvement. He also employed quinine in conjunction with iodide of potassium.

Dr. Le Mounier recommends (*New Orleans Med. and Surg. Journal*) sulphate of quinine in doses of two grains every hour for the cure of erysipelas. He says he employed it with advantage at a time when for five months the disease reigned epidemically, so that on many occasions he dared not use the knife. He has also used it as a prophylactic, and he quotes one case of fistula of the nates, in which he deemed it necessary to operate, and where he gave quinine as a prophylactic, two grains every two hours. This patient was for seventeen days in an infected locality. His wound, nevertheless, progressed satisfactorily, and he was discharged without having had erysipelas.

The August number of *The Practitioner* contains an article by Dr. Brakenridge on the use of quinine as a gargle in diphtherial, scarlatinal, and other forms of sore-throat.

Dr. Cleveland lately brought before the Academy of Medicine of Cincinnati a case in which meningeal symptoms followed the use of quinine in a boy aged fourteen suffering from remittent fever. During the period of cerebral excitement the temperature, which had been 105°, fell to 101°, and the pulse, which had been 120, fell as low as 50. About two scruples of quinine had been given in twelve hours. It was at once discontinued, and the meningeal symptoms subsided in four or five hours.

NEW MODES OF ADMINISTERING AND NEW PREPARATIONS OF QUININE.

M. Claude Bernard seems to be favourably impressed by M. Jousset's method of introducing strong solutions of quinine into the trachea by means of the hypodermic syringe. It is some years since M. Jousset first employed this method. It was in a case of malarial fever accompanied with vomiting and syncope. The patient being propped up and the head thrown back, so that the neck, which was long and very thin, was thus sufficiently extended, the larynx was fixed with the left hand, and the trocar of a small hypodermic syringe plunged into the trachea in the median line between the first and second rings. The sensation conveyed to the hand when the point entered the cavity of the trachea was similar to that experienced when a pin penetrates a thick sheet of paper. The syringe was now screwed upon the trocar, and a strong solution of hydrochlorate of quinine slowly injected. No effort at coughing was produced. At the end of eight minutes the patient had a buzzing in his ears; at the end of twelve minutes the sweating ceased; at the end of eighteen minutes manifest improvement set in; the pulse became more perceptible, and could be counted. In half an hour the appearance of the man was so much altered for the better that he was scarcely to be recognised. The natural heat of the skin had returned, he drank freely without rejecting any of the fluid, and he swallowed a dose of fifteen grains of quinine. An hour afterwards he was able to rise and walk about, though feeble. The pulse rose to 88, and two hours after the injection he ate some rice and meat. In the evening recovery was complete.

M. Jousset was equally successful in the case of a little girl twelve years of age, and these and other cases are recorded by Bernard in a recent volume of his Lectures. They certainly seem to show that absorption from the respiratory mucous membrane takes place with great rapidity, and it is possible to avail ourselves of this fact in certain desperate cases when the condition of the cutaneous circulatition is such that drugs administered hypodermically would not be absorbed.

The insolubility of the salts of quinine is a formidable obstacle to the use of the remedy hypodermically. Nevertheless, many efforts have been made in this direction, especially in America, where acid solutions have been employed with success, although some physicians have asserted that they are frequently followed by local troubles. As was lately mentioned in The Doctor, M. Jaillard proposes the sulphovinate as a more soluble salt; but we apprehend that even with very soluble salts the difficulty will be to introduce by this method a sufficient quantity of quinia, since in obstinate and serious cases it is from large doses only that we may expect success.

Professor Gubler proposes to substitute the bromide for the sulphate of quinine. M. Latour first obtained this salt by double decomposition of the acid sulphate of quinine with bromide of potassium, but a certain quantity of sulphate of potash is always present. M. Boille has succeeded in obtaining a pure salt by employing bromide of barium; indeed, he describes both a neutral and an acid bromide, both of which crystallise perfectly, and are very soluble. Thus, while one part of sulphate of quinine requires for solution 30 of boiling water, 788 of cold water, 60 of absolute alcohol, and 36 of glycerine, the bromide dissolves in 5 of boiling water, 60 of cold water, in all proportions in absolute alcohol, in 10 of glycerine, and also in 10 of a mixture of glycerine and water. Moreover, M. Boille obtains a permanent solution of 1 of bromide of quinine in 15 of cold water by adopting the following manœuvre: To a saturated solution in boiling water which is equal to 1 in 5, he merely adds 10 of cold water. Prof. Gubler, after a year's experiment, concludes that the bromide produces the physiological and therapeutical effects of quinine in doses of 20 centigrammes (= 3 grains) twice a day; rarely he has given 6 grains, and occasionally more. The salt is easily tolerated by the stomach, the noises in the ears and other symptoms of quinism are produced, and the preparation may therefore be substituted with advantage for the sulphate. The salt is therefore a preparation of quinine rather than of bromine, although in persons very susceptible to the influence of the last-named drug some effects of the latter have occasionally appeared, such as drowsiness without noises in the ears, and some muscular weakness, but such cases are quite exceptional. For hypodermic injections M. Gubler employs a solution of 1 in 10, slightly alcoholised. Four or five grains of the salt can thus be administered.

Drs. Prota-Guirleo and Francesco, of Naples, recommend (*Annali Univ.*) sulphophenate of quinine in diphtheria, ¾ to 3 grains four times a day. They employ the same remedy in pneumonia after suppuration has set in; indeed, they seem to have a high opinion of the salt, but in diphtheria they employed at the same time locally oxalic acid dissolved in water or glycerine, and first recommended by Dr. N. Cinny in *L'Indipendente*. More recently M. Cotton has communicated to the *Lyon Méd.* some experiments on the sulphophenate of quinia.

M. Maury has succeeded in preparing the salicylate in acicular prismatic crystals. They are entirely soluble in warm alcohol, but less so in cold; insoluble in water. The salt is decomposed by acids which precipitate the salicylic acid. Its taste is simply bitter, not irritating the mucous membrane at all. He has also prepared an acid salicylate, but this he has been unable to crystallise. He anticipates great advantages from the combination on account of the anti-fermentive powers of the salicylic acid, but we apprehend that its chief use will be as a substitute for the sulphate of quinine. It has already been employed in doses of 1½ grains twice a day. The absorption of the salicylate is particularly rapid. In two hours the acid may be detected in the urine. It is in infectious diseases that M. Maury hopes that the salt he has been the first to prepare will be of most value; in other cases he does not pretend it will displace the sulphate from the first rank.

ABOUT BOOKS.

On the Relation between Diabetes and Food, and its Application to the Treatment of the Disease. By Arthur Scott Donkin, M.D. Edin., M.D. Durham, Member of the Clinical Society of London; late Lecturer on Forensic Medicine and Examiner in Medicine in the University of Durham; formerly Physician to the Sunderland Infirmary and Dispensary, &c. London, 1875.

It was to be expected that Dr. Donkin's proposal to treat diabetes by an exclusive skim-milk diet would provoke considerable criticism. In his former work, which on its appearance was reviewed in The Doctor, he fully explained his mode of treatment, and in the volume before us he replies to some of the criticisms offered, examines other theories, and furnishes new evidence in support of his own conclusions. Among this new evidence great weight must be attached to the cases furnished by other physicians who have communicated them to Dr. Donkin. One of these—Dr. Greenhow's—has been subjected to the criticism of the Clinical Society, and another recorded by Prof. Fyffe, of Netley, seems to support in a striking manner Dr. Donkin's treatment. Here we would remark that it is very unfair to speak of cases as treated by Donkin's method in which milk, and even skim milk, has formed only part of the diet. Again and again Dr. D. has reiterated his views that a diet of skim milk only must be rigidly adhered to in order to succeed, and he asserts that any departure from the rule will be followed by renewed activity of the disease. He now speaks with as much confidence as before of the value of his method as exemplified by more than 100 cases, the treatment having been continued over periods varying from one week to three months uninterruptedly, and no other food taken (page 63). He is certainly entitled to protest against a case being spoken of as if treated by his method in which meat and suet were given as well as milk, and the experiment extended only over four days.

When we consider what little power any drug possesses over the phenomena of diabetes, and when we remember that the experience of nearly a century has proved that the intensity and duration of the disease are greatly influenced by the diet, our greatest hope really seems to lie in some such discovery as that claimed by Dr. Donkin—viz., a method of alimenting a patient with substances incapable of being converted into diabetic sugar. But how about the milk sugar? Some of Dr. Donkin's critics have spoken of this as if it were almost synonymous with diabetic sugar, or cane sugar. This, however, Dr. Donkin denies, saying that milk sugar does not undergo *alcoholic* fermentation, and cannot be reduced by the copper test, while it is subject to *lactic* fermentation. It cannot therefore undergo the same changes as glucose, but is, in fact, at once converted into lactic acid without passing through the intermediate changes to which other sugars are subject. In support of this view he quotes the opinion of the late Dr. Bence Jones. Dr. D. has been at pains to show that good skim milk affords ample nutriment for diabetics. He begins with 4, 5, or 6 pints on the first day, increasing it more or less gradually according to circumstances to 8, 9, 10, 11, or 12 pints *per diem*, which last quantity should never be exceeded. Indeed, he tells us that not more than 7 or 8 pints should be taken in the fluid condition; but when a larger quantity is necessary the remainder should be made into curd. It may be taken cold, or warmed to about 100° F., but should never be boiled, as the properties of casein are changed by boiling. The daily allowance should be divided into regular meals.

We have confined our remarks to the more practical points of the work before us; but the author passes in review the various current theories on the pathology of diabetes, and contrasts them with his own views, evincing throughout a thorough knowledge of the most recent writings on the subject.

The Marriage of Near Kin. By Alfred Henry Huth.
London : J. and A. Churchill. 1875.

The work before us treats of the marriage of those nearly related by blood considered with respect to the laws of nations and the teaching of biology. The subject chosen by our author has of late years attracted a good deal of attention from all quarters, authors usually taking one side or the the other; but we must do Mr. Huth the justice to say that he investigates his subject without prejudice. The subject of marriage is of course fully treated, and we agree with him that "without marriage there would be no State and no people to govern. It is a fallacy, as every man knows, to think that it is sufficient that infants should be born and that it is the duty of the State to see that they are properly brought up. The experience of Founding Hospitals amply shows that this is not an economical method . . . Marriage should not be taxed as it now is; the contract should be clear and easily proved, and no impediment should be thrown in the way of a marriage which is not likely to produce unhealthy offspring, since every impediment directly tends to produce immorality, and immorality is directly and fatally injurious to the community."

We have Chapter I. devoted to the consideration of the degrees within which marriage was prohibited amongst ancient civilisations which have influenced our laws, and the prohibited degrees resulting from them in the various modern civilisations. This chapter contains much information, from a perusal of which we noticed that the ancient kings of Egypt—Ptolemies, for generations always married their sisters, to prevent the royal blood being mixed with that of an inferior degree. Several excellent tables illustrate this and other pedigrees throughout the work.

Chapter III. is very full and interesting; it treats of the marriage customs among every nation: for example, in Yucatan the people never marry a wife of the same family name as themselves. The Comanche Indians increase mostly by theft of children and women from their neighbours, and especially from the Creoles; whilst in New Zealand there is great opposition made to any one who wants to take a wife from another tribe.

"Scrofulous glands and sores are common in Tonga, and in both Tonga and Vevea the children suffer much from malignant pustule, an affection which disappears of itself at nine years of age. The Tongese also had occasionally a mild inflammation of the eyes; nevertheless the people are healthy as a rule; disease is uncommon, and Nature's power for healing is here exceptionally strong. There is one disease which is peculiar to the nobles, who alone are allowed to drink an intoxicating liquor, called *cava.* Cava-drinkers suffer first from weakness and stupor, and if they continue the habit of drinking they grow thin, their eyes inflame, they get an eruption which is marked at points by the appearance of a white scurf, then the skin tightens and cracks, and leaves a large cicatrix on healing, which is looked on as a mark of honour, because it is a mark of nobility."

Our author notices the case of the *Bounty,* and other somewhat allied cases, to show that close marriage between relations does not deteriorate the offsprings of such marriages. He also quotes various authors as Drs. Mitchell, Beddoe, Waitzs, &c.: we cannot, however, but notice that he leans a good deal, if not altogether, to the side of those who favour such close unions. With regard to cattle, he says that some, if not the majority of celebrated breeders and improvers of English cattle, have bred closely in-and-in, and this was necessary, since improvement cannot comprise a large number at first. Mr. Youatt, the distinguished author of works on "The Horse" and on "The Dog," holds that the progeny becomes delicate and the propagation of their kind very uncertain.

Crétinism has often, our author thinks, been mistaken for idiocy as the result of intermarriage. However, the two are essentially different, although the former is often associated with goître. The following table he gives from Dr. St. Lager.

CRETINISM.	IDIOCY.
I. It is endemic in particular parts.	I. Spread indiscriminately all over the world.
II. There is an arrest of development which affects the whole system.	II. Many idiots are perfectly well-formed.
III. Over two-thirds of the Crétins also have goîtres.	III. Neither idiots themselves nor their immediate ancestors have goitres.
IV. The teeth appear late, are irregular, and decay prematurely. A premature ossification of the cranial sutures, except in cases of hydrocephalus. Occasional ossification of the cartilages. A malformed, narrow foramen magnum. The cerebral hemispheres are not symmetrical, and some parts of the cerebral substance are thickened.	IV. Various injuries.
V. The sole cause is the nature of the soil through which the drinking-water percolates.	V. Multiple causes: *a*, Congenital idiocy is caused by the vices of the parents, as drunkenness, senility, accidents, and inheritance. *b*, Acquired idiocy is due to different diseases, such as convulsions, epilepsy, typhoid, drunkenness.

Our author agrees with Watson and St Lager, that the contamination of the water causing Crétinism, is due, not only to passing over limestone, but that iron pyrites is present, whose presence is shown by crystals of sulphate of calcium in calcareous rocks, by sulphate of magnesium in dolomite and by sulphate of iron and aluminium in other rocks. There is also often present copper pyrites and the double sulphate of copper and iron.

The author concludes his work with a most interesting Appendix, containing cases to prove that the marriage of cousins is not, as generally supposed, injurious to offsprings. The work is carefully written, and shows the author has been at much trouble and pains to consult every available source for information, which he presents to the reader in an agreeable and entertaining form.

Annual Report of the Medical Officer of Health, Sheffield, 1874.

The annual reports of medical officers of health being primarily intended for the perusal of the local health authorities, who are generally business men, unacquainted with statistics or medical manners, should above all things be easy to understand, concise, and practical. The Sheffield Reports are confused, unintelligible, and contain much that would be actually most pernicious to the inhabitants if acted on. The M.O.H. should, for obvious reasons, be delicate in giving gratuitous advice on medical matters; but when he offers it, it should at least not be dangerous to follow. In his "Friendly Advice to Mothers" Dr. Griffiths, among other hints, advises no sugar to be given to infants who have to be bottle-fed. This would be contrary to general opinion, and would be depriving the children of a substitute absolutely demanded to make up for the deficiency of sugar known to exist in cow's as compared with human milk. We do not find one word on the all-important subject of the trade-diseases of this great working town. We have been unable to find anywhere in the text a statement of the mortality from various diseases, and in the unintelligible table at the end the reader must calculate everything for himself. Dr. Griffiths is not very correct in his figures, as we have found in many places where we have tested his calculations, and hence an unavoidable feeling of uncertainty in accepting those we have not tested. He is liberal in retailing his views on etiology and pathology of disease, and they are worth recording, being unique. The cause of the "peeling" after scarlatina is the "scorching" of the skin during the febrile stadium; unsound liquid or solid food "acting singly may become a positive poison to the blood, either by inhalation or absorption," and cause fever; diarrhœa "is contracted and spread in a manner similar to that of fever;" "imperfect and perhaps total absence of (*sic*) ventilation necessitates open doors and windows in hot weather, and thus people, awake or asleep, live in an atmosphere of a most dangerous character," and become liable to diseases. The most absurd thing in the Reports before us is the author's ingenuous and ingenious attempt to show the vast sanitary advantages of the baths established by the Corporation, which seem to be a tender point. Dr. Griffiths has discovered that the general mortality was least during the hot weeks, when the number of bathers was greatest, and argues the Corporation Baths have saved thousands of lives! Blissful innocence! It will be most kind perhaps to refer Dr. Griffiths to any elementary work on hygiene, where he will learn that the general mortality diminishes during the warmer months, even without the aid of the Sheffield Baths or its M.O.H.

The Chicago Medical Journal and Examiner.

For a number of years two high class medical journals have been published in Chicago, under the auspices of the two colleges. Lately, however, a joint stock association has secured possession of both, and consolidated them under the above name. The first number of this new effort is an interesting one. In it Dr. C. H. Leonard has an article on "The Use of Warm and Hot Water in Surgery," in which he shows that many recent recommendations, supposed by their authors to be new, were anticipated by Hippocrates. Dr. Andrews writes on sulphate of cinchonidia, which he thinks nearly equal to quinine in efficiency, and less apt to disturb the brain. The reports of societies and the selections are very full. We wish the consolidated journal success.

We have received Mr. Brudenell Carter's new work on Diseases of the Eye, which will be reviewed in an early number. We have also received the following pamphlet: *Etude Chimique sur la Source Sulfurée Sodique Forte et Iodobromurée de Challes (Savoie).* Par le Dr. F. Garrigou. Chambéry, 1875.

BRITISH MEDICAL ASSOCIATION.

Forty-third Annual Meeting at Edinburgh, 1875.

SELECT ABSTRACTS OF PAPERS READ.

TREATMENT OF ANEURISM OF THE ARCH OF THE AORTA BY MEANS OF GALVANO-PUNCTURE.

BY T. M'CALL ANDERSON, M.D., GLASGOW.

After giving a report of two cases in which this treatment was carried out with success, Dr. Anderson laid down the following rules. 1. The continuous current battery should always be employed, never the induction apparatus. 2. The kind of battery is of less consequence, if it be in good working order; but the cells should be large, so as to increase the chemical effect. 3. The needles should not be very thick, but very sharp, and should be oiled before being introduced, and that portion of them which traverses the skin, walls of the sac, and intervening tissues should be insulated by means of a coating of vulcanite. 4. The needles should be connected with the positive pole of the battery. 5. A weak current of electricity should be used (from four to eight cells of a large Stöhrer's battery), and the operation may be continued for about an hour. 6. The number of operations and the length of the intervals between each must depend upon the effect of those which preceded them. Dr. Anderson concluded by referring to the dangers connected with the electrolytic treatment, viz., inflammation and the entrance of air and of clots into the circulation, and observed that it was a question to which attention should be specially directed in the future whether the consolidation of that portion of the aneurism which approaches the surface may not, in some cases at least, favour the extension of the disease in other directions, and lead to internal pressure symptoms, and to rupture into internal organs.

THE APPEARANCE OF THE TONGUE IN HEALTH AND DISEASE.

BY R. TORRANCE, L.R.C.P.ED., MATFEN.

In this paper the appearance of the tongue was described, in the first place in a state of perfect health, and in connection with this state, the author referred to the effect of an exalted nervous system upon it, as illustrated in persons of a highly nervous temperament; then its appearance in various diseases.

THE PNEUMONIAS OF CHILDHOOD, AS ILLUSTRATED BY CLINICAL CHARTS.

BY W. STEPHENSON, M.D., EDINBURGH.

After criticising the ordinary terms applied to the inflammations of the lungs in children, as showing the inaccurate ideas existing regarding the subject, Dr. S. demonstrated the character of the disease in its two chief forms by means of charts of the temperature, night and morning, taken in the Children's Hospital. He showed that by the chart the character of the disease might be recognised at times when otherwise it mightbe overlooked, or before evidence of its existence could be found in the lungs. The recognition of distinctive types in thermometric charts gave a truer perception of the constitutional condition than could be gained by other means, and furnished more reliable indications for treatment than physical signs.

TETANY.

BY JOHN HADDEN, M.D., MANCHESTER.

After commenting on the very recent date at which this disorder had been described in the country, he related two cases which he observed in March, 1875. Case 1 had suffered for more than twelve months from menorrhagia and diarrhœa, and, during the attack, which was one of medium severity, there was one-fifth of albumen in the urine. Bromide of potassium was given in half-drachm doses every hour, and the tetany soon disappeared. Case 2. had a mild attack. He had been troubled for two years with diarrhœa, which has caused by a constriction in the rectum. The same treatment as in Case 1. was followed by a like satisfactory result. After commenting on the probable cause in each case, he concluded by urging the profession to watch for and record cases of tetany, seeing that we must have a wider experience of this affection before we can hope to ascertain its real cause.

ACCOUNT OF SOME EXPERIMENTS RELATING TO THE PATHOLOGICAL ANATOMY OF MYELITIS.

BY D. J. HAMILTON, L.R.C.P. & S., FALKIRK.

Experiments were made made on small animals. The spinal cord was artificially inflamed by having a thread passed through it. The appearances found were contraction of the axis-cylinders, subsequent fissiparious division of the contracted portions, and the formation of pus from these. The nerve-cells were affected with granular or "œdematous" degeneration. The neuroglia was somewhat increased, but not to a great extent. The perivascular lymphatic spaces of the surrounding pia mater were filled with lymph-corpuscles. One or two cases were quoted in confirmation of the facts.

REMARKS ON WHOOPING-COUGH, AND ITS TREATMENT WITH CARBOLIC ACID VAPOUR, WITH DISCRIPTION OF A STEAM-DRAFT INHALER.

BY ROBERT J. LEE, M.D., LONDON.

Dr. Lee directed attention to the very slight variation in the annual mortality from whooping-cough, to its widespread geographical distribution, and to the results of various kinds of treatment. The conclusions which he deduced were the results of observation of six hundred cases, and the most important remarks were connected with the rise and fall of the disease at the first or second quarter of the year, and the frequency with which the disease was not diagnosed on account of the absence of the laryngeal spasm or whoop. The use of carbolic acid was recommended as proving more satisfactory than any other kind of remedy; and the method of administering it in the form of vapour by means of a steam-draft inhaler was explained. A solution of one part of carbolic acid in ten of water was kept as a standard for mixture in the proportion of two drachms to four ounces of water. This was introduced into the inhaler, and every four hours its vapour was inspired for ten minutes or a quarter of an hour.

CASE OF PARALYSIS OF THE SERRATUS MAGNUS MUSCLE.

BY SAMUEL WOODMAN, F.R.C.S., RAMSGATE.

The patient was a man, aged 39, who had been appointed lamplighter in a temporary ship, the lamps of which were placed high above the platform on which he stood. Six months after his appointment (about May, 1874), he felt a weakness in his right shoulder, which continued to increase until he became unable to use the arm. When he came under Mr. Woodman's care, there was the usual signs of paralysis of the serratus magnus; he had bulging of the ribs and raising of the affected shoulder. There was no paralysis of any other muscle than the serratus magnus. He had been treated by daily faradisation, cold douches, rest of the arm in a sling, and doses of quinine and strychnia. There had been considerable improvement in the course of two months.

OVARIAN DROPSY: SOME POINTS IN ITS PATHOLOGY AND TREATMENT.

BY PROTHEROE SMITH, M.D., LONDON.

Dr. Smith divided his paper into three parts by asking: 1. Can any reliable prophylactic means be devised to lessen the frequency of ovarian disease, by obviating *in limine* its cause? 2. What is the best manner of preparing patients for ovariotomy, and of performing the operation, with a view to success? 3. What treatment, after the operation, is best calculated to ensure the recovery of the patient?

ON THE PREVENTION AND MANAGEMENT OF MISCARRIAGES.

BY ARTHUR W. EDIS, M.D., LONDON.

In a series of 2,000 cases observed by the author, there were no fewer than 1,147 miscarriages compared with 4,588 children born at full time. Miscarriages were far too lightly esteemed, both by the public at large as well as by practitioners.

PLACENTA PRÆVIA.

BY W. DONOVAN, L.R.C.P.ED., CARRIGNAVAR.

Dr. Donovan said that he believed the cause of hæmorrhage

in placenta prævia to be that the part of the placenta lying directly over the os internum uteri is unattached by blood-vessels or otherwise, and, therefore, does not expand uniformly with that part attached to the uterine walls. Consequently, during the latter month of pregnancy, the rapid enlargement of the uterus causes an amount of strain on the zonal vessels of the placenta sufficient to rupture them.

THE EXAMINATION OF THE FEMALE BLADDER.

BY J. MATTHEWS DUNCAN, M.D., EDINBURGH.

Dr. Duncan proposed that, after dilatation with the dilator of the shops—an instrument much in need of improvement—a speculum be introduced similar to the rectum-speculum.

OBSTETRICAL STATISTICS.

BY J. G. SWAYNE, M.D., CLIFTON.

Correct obstetrical statistics, especially of cases attended in private practice, are of great importance just at the present time, when the principles and practice of midwifery are undergoing radical changes. The records of private practice will supply what we cannot obtain from lying-in hospitals—viz., correct statistics of midwifery practice amongst the richer classes of society.

ON UTERINE FLEXIONS AND DISPLACEMENTS; AND THEIR MECHANICAL TREATMENT.

BY J. G. S. COGHILL, M.D., EDINBURGH.

Dr. Sinclair Coghill confined his remarks mainly to the mechanical treatment of uterine flexions and displacements, only referring incidentally to their pathology.

NITRIC ACID AS A CAUSTIC IN UTERINE PRACTICE, AND ITS SUPERIORITY AS SUCH TO NITRATE OF SILVER.

BY JAMES BRAITHWAITE, M.D., LEEDS.

Nitric acid is the caustic which, of all others, is the best adapted for use in cases of chronic inflammatory disease of the os and cervix uteri, resulting in erosion or ulceration. Nitrate of silver is inefficient, and requires frequent reapplication, to atone for its defects both in degree and in the nature of its action. Nitric acid, on the other hand, acts as a caustic in these cases with certainty, and neither does too much nor too little.

ON THE MANAGEMENT OF THE LYING-IN WOMAN.

BY THOMAS WHITESIDE HIME, B.A., M.B., SHEFFIELD.

Dr. Hime began his paper by arguing that the old and still established theory which represents the lying-in woman as being in a state similar to that of a person after a serious amputation, the uterus being compared to the part operated on, is unscientific and untenable. Parturition is a physiological process, the fulfilment of a natural function, and has no analogy with an operation, which is an interference with function. Amputation, whether the result of disease or accident, involves consequences which have no analogue in the process of parturition. The uterus after labour is no more comparable to a stump after amputation than the uterus after or during menstruation. After natural labour (to which Dr. Hime's paper chiefly referred) there is nothing comparable to the collapse succeeding a major amputation; there is no fever, no suppression of secretions, no suppuration, or, if pus be present, it is not derived from the uterus at all, but from the vagina or external genitals, in the great majority of cases. The insignificant rise in temperature, from 0.5 deg. C. in multiparæ, to 0.8 deg. C. in primiparæ, is due to normal physiological and not to morbid action, being the effect of muscular exertion, increased activity of the lungs, liver, and other organs, when relieved from the pressure of the gravid uterus, and is only fleeting. Milk fever is far more talked of and written about than seen, and is of rare occurrence. The rise in temperature which accompanies the commencement of mammary activity is slight, temporary, and unaccompanied by mental depression or constitutional disturbance of any kind. Operations performed immediately after labour will yield kindly, of which Dr. Hime related several instances in his own practice. Regarding parturition as a normal physiological process, Dr. Hime urged the importance of a decided alteration in the common mode of treating lying-in women as *patients*, and confining them to bed for ten or twelve days on low diet; the ordinary puerperal dietary being such as would certainly not be given to any patient after amputation. He urged that water-gruel, barley-water, tea, and dry toast, should be abandoned for milk, eggs, good soup, chickens, and other digestible meat, to be given from the first, and of course in quantities suitable to the conditions of individuality, want of exercise, &c. Stimulants are decidedly injurious, except in special cases. It is often urged that, as a large amount of waste uterine tissue, &c., has to be got rid of, low diet should be adhered to; but milk has also to be secreted, and any how health and vigour will promote excretion, and the performance of all vital functions better than a state of debility. Opiates, ergot, and other drugs should only be given under necessity. The child should be applied as soon as the mother's state permits; if there be no milk at first, only for a minute or so to encourage its secretion, and the involution of the uterus. The binder is more of a consolation than a benefit after the first twelve hours, but not so the early removal into a fresh bed, and room, if possible, and this may be done within forty-eight hours. The woman may sit up in bed for a short time from the first, a continual maintenance of the recumbent posture for ten or twelve days being as injurious as it is unnecessary, and most patients may be on the sofa on the fourth or fifth day. Above all things, the medical attendant should *see* that his directions are carried out, and not trust they will be so, especially as to the speedy removal of soiled linen, &c.; not that its presence, any more than the neighbourhood of privies, want of ventilation, &c., will *per se* develope metria any more than typhoid; otherwise, eight or nine-tenths of lying-in women must inevitably suffer from it, a result equally certain if medical men could convey the germs of disease with them as readily as is assumed. Cleanliness and ventilation always tend to preserve health and check disease, but they are no more needful for the lying-in woman than good nourishing food. After natural labour a woman is not in a diseased state, and the maintenance of health and vigour will be the most successful means of averting all risks.

NOTES ON A CASE OF TRIPLETS COMPLICATED BY DOUBLE UTERUS.

BY A. G. DUNCAN, M.B., CRIMOND.

This was a very rare and interesting case, in which there was a depression in the abdomen indicating a division between two tumours formed of the two halves of the uterus, one containing two children and the other one. The children, all females, were born alive; their united weight was 20 lbs. On subsequent examination the uterus was felt to be divided by a septum.

ON DYSMENORRHŒA.

BY E. GARRETT ANDERSON, M.D.

In this paper Mrs. Garrett Anderson discussed the following questions. 1. How far is the mechanical theory of dysmenorrhœa supported by facts? 2. What is the relation between mechanical or obstructive dysmenorrhœa and the so-called neuralgic, congestive, and rheumatic forms of the complaint? 3. To what extent ought the mechanical theory, if we accept it, to guide our treatment?

SYPHILITIC PLACENTA.

BY ANGUS MACDONALD, M.D., EDINBURGH.

Syphilitic disease of the placenta had of late attracted some attention on the Continent, but had commanded little attention from the British profession. The paper embodied the result of a careful microscopical examination of two undoubted specimens of the disease. The chief difficulties that lay in the way of ascertaining the true nature of the disease were twofold. 1. It was liable to be mistaken for fatty degeneration of the placenta, and had been so mistaken by excellent observers, such as Kilian and Robin. 2. It was frequently almost impossible to arrive at a satisfactory proof of constitutional syphilis till the discovery by Wagner, of Berlin, of osteochondritis syphilitica. Microscopical and chemical examination of the placenta were sufficient to show that such cases were not fatty degeneration. From his researches Dr. Macdonald drew the following conclusions. 1. A large number of intra-uterine deaths from diseased placenta are due to the existence of constitutional syphilis in either or both parents, and the death is the result of progressively increasing defective blood-supply, owing to the changes described above. 2. The changes taking place in the placenta give the organ a pale appearance, and increase its size, and in consequence the appearance it presents is liable to be mistaken for fatty degeneration. This mistake is easily prevented by microscopical and chemical examination of the diseased organ. 3. The bones of the dead fœtus will (as they will show osteochondritis syphilitica if the constitutional disease be present) afford a valuable and infallible means of deciding whether the corresponding placenta is syphilitic or not. 4. Medicines thought to be beneficial by their action on the blood, as oxygen given in such cases, most probably are useful if they really do good, as blood depurators, and may be beneficially replaced by iodide of potassium and other accredited antisyphilitic measures. 5. On the whole, there is little good to be expected from premature labour in such cases, as the child, though born alive, is saturated by the disease. We may expect better results by antisyphilitic measures acting through the mother on the placenta and the child at the same time.

CONTAGION.

Dr. P. M. Braidwood read a paper on "The Life History of Contagion," prepared by himself and Mr. Francis Vacher. The first problem, he said, which they had tried to solve in the course of a long series of experiments, undertaken by them with the aid of a grant from the Association, was—What is contagion? Second—In what manner is it generated and communicated? And, third, What are the conditions on which its life and activity depend? The whole of their experiments had been conducted with pure vaccine lymph, and also with lymph in solution with water. The result of these experiments was to demonstrate that those constituents of the lymph which became part and portion of the water brought in contact with vaccine were not seemingly the infecting agents—that was to say, the mixture of water and vaccine failed entirely to produce vaccination, whereas the sediment which was got at the bottom of the solution, and which formed particles of from a 20,000th to 30,000th of an inch in diameter, seemed to be the agents by which the contagion was communicated. Dr. Braidwood further spoke of the action upon the vitality of lymph of carbolic acid, sulphurous ether, quinine, chloralum, chlorine, &c., and then went on to describe the effect of inoculation of a heifer with lymph. The principal local changes caused by the vaccination were those affecting the hair and hair cells, but no bacteriæ or fungus forms were detected.

Dr. J. T. Maclagan read a paper on "The Nature of Contagion." Contagion, he said, in its chemical composition closely resembled the fluids in which it existed; it was largely produced in the system during the disease to which it gave rise; the poison which was produced was always identical to that which produced it; it was readily destroyed when exposed to the atmosphere, but it might be preserved for a length of time, and conveyed from one spot to another without losing its power. He directed special attention to the power of reproduction by contagion, remarking that the processes by which it was reproduced were as unvarying as those by which animals were reproduced. Every specific disease, again, had its own special poison, and the only view of the nature of contagion which could adequately account for all these facts was that which regarded the poison as consisting of minute living organisms. Such living germs were probably of albuminous composition, possessing the power of organic development, always reproducing their own kind, capable under favourable circumstances of preserving their vitality, but subject to destruction by exposure to the atmosphere.

The Chairman said that long ago he was a strong advocate of the chemical theory of contagion, and the most beautiful specimen of inductive reasoning we possessed was Baron Liebig's chapter on contagion and miasm. Modern research, however, had given little support to this view. The very specific character of contagion—its power of reproduction—was an argument in favour of the germ theory. They were as certain that whatever produced scarlet fever would produce scarlet fever, as that a dog would produce a puppy, or a rose tree would produce a rose tree.

Dr. Carpenter (Croydon) pointed out that in the dilution of the vaccine lymph with distilled water the small quantity of alkali in that water might have rendered the vaccine material inactive, and hence followed the want of results which might have followed with the addition of some chemical agent such as carbonic acid. As to contagion, he thought it was to be traced to some organic germ, which might, under certain meteorological or physical conditions, develope into one or other of the diseases to which the human body was liable.

Professor Wanklyn (London) pointed out that though the water used to dilute the lymph referred to in the first paper was not perfectly pure, the experiments were all the more cogent, inasmuch as they proved that contagia were destructible by water. This fact of the germ forms losing their power was of very great importance, and if they admitted the accuracy of these experiments, they must admit the possibility of destroying every poison germ by dilution. As to the nature of contagion, while not defending the chemical theory, he held that, unless they could discriminate germs, the germ theory had no vitality in it.

Dr. Macnamara (Calcutta) was doubtful as to diseases being alone capable of reproducing themselves, for scarlet fever was never found in India, or cholera in Australia, although both countries were in communication with the west and with each other.

PRODUCTION OF A NEW NOSE.

Dr. James Hardie, Manchester, Eng.- describes ~~submitted an interesting paper on~~ a new rhino-plastic operation. The operation described consisted in the substitution of the upper phalanx of the forefinger for the nasal bones and cartilages so as to give the required nasal prominence. The patient, a young girl, having lost both bones and cartilages, it was only after failure in other methods that Dr. Hardie determined to attempt the one in question. The mode of procedure was to bandage the arm in such a position as to enable the forefinger to be laid and plastered upon the nasal cavity, in which position the finger was kept for about three months. After the first few days the girl did not suffer from the irksomeness of her position; gradually the finger became attached to the cavity, and ultimately the upper phalanx of the finger was separated from the rest by the forceps. The doctor had at first meant to employ the portion of the finger merely as a substitute for the nasal bones and cartilages, and to lay over it flaps of skin from the face or arm in the usual manner, and to this plan he ultimately returned, although, at one time, he had been so satisfied with its appearance that he had thought of using the phalanx of the finger itself as a substitute for the nose. He still thought that, with increased care, and by exercising more of the finger, there might be no necessity for covering it with flaps of skin in the usual manner in order to the production of a fair substitute for the nose.

The President remarked that there could be no question as to the ingenuity of this operation, and as to the patience and ability of the operator, but it was a question how far it was an operation which surgeons would be willing to adopt in practice.

TREATMENT OF ACUTE RHEUMATISM.

Dr. Russell Reynolds (London) communicated a paper on the "Treatment of Acute Rheumatism by Tincture of Perchloride of Iron," in which, by the citation of a number of cases, he showed how early relief had been afforded, not only from pain, but from the abnormal heat, and from extension of the disease to the heart, by the use of the remedy referred to. Of the cases cited, 44 per cent. of first attacks were convalescent within the first week, while of those in their second, third, or fourth attack, 42 per cent. recovered within the same period.

Dr. James Johnston followed with a paper on "Rheumatic Fever and its Treatment by Bi-carbonate of Soda."

Dr. Long Fox (Bristol) said that in spite of all that had been said by the two gentlemen who had contributed the papers, and especially by Dr. Reynolds, he did not think that heart disease accompanied so often as had been represented cases of rheumatic fever. In fact, he believed that in many of the sixty cases referred to by Dr. Reynolds the patients had come to him with heart disease to a great extent already developed before the rheumatic fever attack. That fever had been treated in a good many different ways by different physicians, and he thought he was quite within the mark in stating that few of them were satisfied that the system advocated by Dr. Reynolds was superior to any other of the modes of treatment. For his own part he was more content with the practice of frequent blistering of the joints than he was with anything else, especially when that was combined with alkalies, and when the patient was watched with the utmost possible care, and the greatest attention at the same time paid to the bed and blankets.

Dr. Crighton (Tavistock) said he had been in the habit of treating cases of rheumatic fever with large doses of tincture of perchloride of iron, and also with tincture of the muriate of iron, and the results had been that the fever, which otherwise would not have been subdued within, say six weeks, had been reduced within ten days or a fortnight. At the same time, under that treatment he found that the amount of heart disease accompanying rheumatism had been very greatly reduced.

Dr. W. Stephenson said that the subject they were now discussing was, as he had heard a Scotchman express it, rather a "kittle" subject. He thought that in investigating such subjects, or in drawing conclusions from their treatment, they should keep in view the age of the patients. They all knew that children suffering from rheumatic fever were much more subject to have their hearts affected by it than adults were. In fact, it was now generally understood that after thirty years of age a man's heart was pretty safe from the effects of rheumatic fever. He concluded by stating that in his opinion the results of Dr. Reynolds' method of treatment had been very satisfactory indeed.

Dr. Meacham (Manchester) said he was on one occesion laid up for six months with rheumatism in the knee: therefore he could speak from experience (laughter). All sorts of remedies were applied, but he objected altogether to blistering. He believed that carbonate of soda was one of the very best remedies they had in medicine for rheumatic fever or rheumatism. He had not had an attack now for nineteen years. He had taken he could not say how much carbonate of soda, and he should not have any objection to take two drachms at any time when he suspected an attack was approaching. He said so because he believed it was better to shoot the enemy down as soon as you saw him, rather than wait till he came and seized you.

UNILATERAL PHENOMENA OF MENTAL AND NERVOUS DISORDERS.

Dr. A. Robertson (Physician to the Town's Hospital and City Parochial Asylum, Glasgow) next read a paper containing a series of observations on this subject. He enumerated some of the principal varieties of physical and somatic disorders in which unilateral phenomena occur. In the first place he gave a number of instances where unilateral mental phenomena had been noticed, mentioning that he had recently made a careful examination of 250 insane patients in the asylum under his charge, and had found that 34 of the patients entertained clear and well-defined illusions or hallucinations of one or other of the senses. In six of the cases where hallucinations existed, they were confined to the hearing organs, occurring in five of the cases in the left ear, and in one case in the right ear. Details of the hallucinations were given, particular reference being made to the fact that Continental observers corroborated the speaker's experience, that the phenomena were most frequently observed in the left side. The phenomena in question were stated to be most common in recent cases of insanity, and particularly where the disease had been caused by the stronger alcoholic liquors. On the unilateral motor phenomena, the writer submitted the following conclusions as supported by his observations :—

1st. That convulsions might begin in different parts of the body, though there was no reason to think there was any change in the seat of the lesion.

2nd. That in unilateral convulsions the so-called bilateral muscles were implicated, but the twin muscles of the otherwise sound side in most cases did not contract so firmly as those in the side first convulsed.

3rd. The higher up the lesion the more disposed was the convulsion to become general.

In concluding his paper, Dr. Robertson gave it as his opinion that one-sided disorders of motion and sensation had their analogies in the sphere of mind—an imaginary voice heard in the ear, or a visionary form seen on one side, having its counterpart in one-sided neuralgia ; and that just as the partial might emerge into the general convulsive seizure, or as the limited disorders of sensory functions, such as was seen in a severe neuralgia might, though rarely, be diffused in various directions along the sensory nerves, so might the sensorial disturbances evinced by an illusion become generalised, involving the mental powers in various degrees in different cases.

INSECTIVOROUS PLANTS.

The "Digestive Principle of Insectivorous Plants" was the subject of an interesting paper by Mr. L. Tait (Birmingham). This gentleman communicated the results of certain experiments he had made for the purpose of separating the digestive principle or ferment, on which the remarkable power possessed by certain plants, as pointed out in Mr. Darwin's recent interesting work, is dependent. Mr. Tait showed that it was possible to separate this principle from the plant for experimental purposes. As to the precise method of its action, he was still engaged in inquiry ; but, so far as his researches had gone, he was able to confirm the view taken by Darwin, that the chemical processes concerned in animal and plant digestion were identical.

UNUSUAL CASE OF EPILEPSY.

Dr. P. Maury Deas (Macclesfield) read notes on a case of epilepsy exhibiting unusual features, which had come under his observation. This case, it was stated, had presented first, violent rhythmical oscillating movements of the head, to the extent of 100 in the minute ; second, strong tetanic spasms of the limbs, extending soon to the whole body ; third, contraction and deformity, first of the right foot and then of the left, coming on during severe attacks of fits, and remaining persistent, the deformity being precisely similar to that of an ordinary club-foot. The patient had, it was mentioned, occasionally as many as forty fits in the course of a night, the attacks being attended by complete unconsciousness and other usual epileptic symptoms. One peculiarly interesting feature of the case was, that the deformity of the feet had been cured by reduction under chloroform, and the subsequent application of splints. The case also presented some points allied to hysteria.

CURIOUS CASE OF SUFFOCATION.

This paper, by Dr. Beveridge, gave account of a case of suffocation, in which a diver at Aberdeen lost his life through excessive pressure upon the pulmonary circulation. Two divers, he said, went down from opposite sides of the same boat, equipped with the ordinary apparatus. The two air cylinders were separated from each other, but both were worked by the same mechanism. One of the men came up in a short time, as something had gone wrong with his helmet ; but the other remained beneath the water, after giving the signal "all right." As the last-mentioned diver, however, did not give the signal for his tools to be sent down, he was pulled up, when it was found that he had been suffocated. At a post-mortem examination, forty-eight hours afterwards, Dr. Beveridge came to the conclusion that the excessive pressure of the air had compressed the vessels of the lungs so as to stop, or almost stop, the circulation in that region on the man being brought to the surface, and the pressure thus removed, the lungs had rapidly filled with blood, and given way in all directions, producing hæmorrhage into that organ.

In a conversation that ensued, several gentlemen expressed doubts as to the cause of the man's death, suggesting that although one of the diving-bells was safe, the other might not have been so, and that this might not have been ascertained on account of the connecting-tube being out of order.

IN THE LABORATORY.

BROMIDE OF ESERINE.

M. Duquesnel has been able to obtain a bromide of eserine, the alkaloid of Calabar bean, which promises to supplant some of the other salts, inasmuch as he has been able to crystallise it, and its neutral solution possesses the property of contracting the pupil. The other salts, it is well known, have not been crystallised, and are apt to be acted upon by the atmosphere. They are, in fact, yellowish, or reddish amorphous deliquescent masses, the sulphate being the most commonly used. M. Duquesnel's crystals keep in the air without alteration, are perfectly soluble in water, and the solutions are neutral to test-paper. They may therefore be advantageously substituted for the sulphate.

ARTERIAL AND VENOUS BLOOD.

MM. Paquelin and Jolly have communicated to the Société de Médecine Pratique a series of investigations respecting the chemical constitution of arterial and venous blood. They have isolated a bi-ferric phosphate of an orange-yellow colour. They suggest that it is this colour which has given rise to the supposition that the iron in the blood is in a state of sesquioxide. They themselves supposed that the colour might be due to traces of this latter ferruginous compound, but on treating with glacial acetic acid the orange colour was not removed. Contrary to the generally received opinions, they found in the blood but very minute quantities of earthy phosphates. The most important results of their researches are—

1. The arterial blood is the richer in phosphate of iron and earthy phosphates.
2. Venous blood is the richer in alkaline chlorides and sulphates.
3. Arterial and venous blood are equally rich in alkaline phosphates.
4. Oxide of iron exists in the free state in venous blood.

A NEW REAGENT FOR BILE.

In a recent communication to the Société de Thérapeutique, M. Constantin Paul brought forward methylaniline violet (Paris violet) as a delicate reagent for detecting the presence of bile in urine. If Paris violet be put in contact with ordinary urine, it does not change colour, and tinges the urine a bluish colour. The colour is dichroic—blue by transmitted and violet by reflected light. The presence of diabetic sugar, or albumen, does not cause any change to take place, but if bile be present, or at least its colouring matters, the violet passes into a red, which resembles in hue the colouring matter of the blood. This change takes place immediately in the cold.

M. Paul claims that this reaction is more sensitive than that afforded by the nitric acid test. Paris violet, however, gives a somewhat similar colour when brought into contact with blood, so that some care is requisite in applying the test.

SILVER STAINS.

A writer in *l'Abeille Médicale* gives the following method for removing the often troublesome stains on the skin produced by the local application, whether intentional or accidental, of silver nitrate :—

Put a few centigrammes of iodine (*i.e.*, about a grain) in a saucer, and add a few drops of ammonia to it ; then smear the stains with the iodine. The stains will immediately disappear, even if they be extensive and of old standing. The remainder of the mixture of iodine and ammonia must be thrown away *immediately*, as it contains iodide of nitrogen, a substance which explodes when in the dry state.

BROMIDE OF LITHIUM.

M. Yvon (*Répertoire de Pharmacie*) suggests the two following methods of preparing this salt :—

1. Thirty-seven grammes of carbonate of lithium are suspended in 200 grammes of distilled water, and 80 grammes of bromine added. A current of sulphuretted hydrogen is then passed through the mixture until all the bromine has disappeared. Hydrobromic acid is formed, which decomposes the carbonate of lithia, bromide of lithium being produced and sulphur set free. A slight heat is then applied to drive off excess of sulphuretted hydrogen and agglutinate the sulphur. After filtration the liquor is concentrated, and if it be desired to obtain the bromide in crystals the desiccation is finished under a glass in the presence of sulphuric acid.

2. Sulphate of lithia is first prepared by treating 37 grammes of carbonate of lithia with 49 grammes of monohydrated sulphuric acid, diluted with its own volume of water. On the other hand, 119 grammes of bromide of potassium are dissolved in the smallest possible quantity of water. When the two solutions are mixed there is an abundant precipitate of sulphate of potash, the formation of which is assisted by agitation or the addition of a little alcohol. The whole is then evaporated to dryness, finishing the operation on a water bath. The residue is treated with alcohol, which removes only the bromide of lithium, and deposits it again upon evaporation. The bromide may then be obtained crystallised by dissolving it in water and evaporating, or it may be kept in solution of known strength.

NOTES, NEWS, AND GOSSIP.

The British Association.—The forty-fifth annual meeting of the British Association for the Advancement of Science was held at Bristol this year. The first general meeting was held on Wednesday evening, August 25th, when the President elect, Sir John Hawkshaw, F.R.S., delivered his presidential address. He took for his subject the "History and Progress of Engineering."

The Pharmaceutical Conference.—The twelfth annual meeting of the British Pharmaceutical Conference commenced on Monday, August 23rd, at Bristol, under the presidency of Mr. T. B. Groves. The President's address was delivered on August 24th.

Removal of the Larynx.—Prof. Bottini, of Novara, has performed this operation on a healthy young man, who, on account of dyspnœa, had already had laryngotomy and cauterisation of the larynx performed. The operation for removal lasted an hour and a half, and left the patient much exhausted. He was, however, much revived by injections of beef-tea and wine. Examination of the larynx showed that it was quite obstructed by a greyish-red tumour. In spite of an attack of erysipelas and a series of abscesses, the man gradually improved, gained the power of deglutition, and was able to cough, breathe, and sleep well.

Frequent Tapping.—Our Italian exchanges report that the widow of G. Rovani, a well-known literary man, died on the 10th of August of ovarian dropsy of more than six years' duration, during which period paracentesis had been performed 354 times.

Quack Advertisements in Medical Papers.—It was reserved for the *Sanitary Record*, published by so respectable a house as Messrs. Smith, Elder, and Co., and edited by Ernest Hart, Esq., of the *British Medical Journal*, &c., to fill up its advertisement columns with announcements of quack medicines, addressed—

"TO LADIES.

Bannen's Patent Female Pill—The Woman's Friend."

Morphia or Water.—M. Laffitte has assured the French Society for the Advancement of Science that the subcutaneous injection of pure water is quite as efficacious as a solution of morphine (!) He says the anodyne effect is due to the compression of the terminal nervous filaments by the water.

Abnormal Function?—The *American Journal of Obstetrics* for August outrages common sense and common decency by printing the lucubrations of a Dr. King, who has discovered that menstruation is an abnormal process *which ought to be prevented* by the impregnation of healthy girls during one of the ovulatory periods which precede the establishment of menstruation at the age of puberty.

Medical Progress.—The editor of the *Danbury News*, in an article on "Medical Progress," reports that an English physician recently removed a section of a patient's liver, placed it on a plate, scraped it carefully, and returned it to its place, fully restored to its normal action. This, he thinks, promises to work a revolution in the treatment of disease, and in a few years we shall have an addition to domestic literature something like this : "Husband, I wish you would take John's right lung down to the doctor this morning, and have the middle lobe fixed ;" or, "Will you step into the doctor's when you come home this noon, and see if he has Mary's liver mended, as she wants to go out to tea this evening?" The practice will become so common in time, we are sure, that none of the neighbours will be startled to see a wife, with a veil tied around her head, leaning out of a bedroom window, and shouting to her receding husband : "Jer-e-*miah!* tell Dr. Scrapen to send up Willie's right kidney at once, whether it is done or not. He's had it there mor'n a week, and the child might as well be without any kidney, and done with it!"

Galvanic Sutures.—The application of galvanism in the form of *galvanic sutures* for the purpose of inducing the union by first intention of poorly nourished and imperfectly organised surfaces, has been first made by Prof. Pippingsköld, of

Helsingfors. In Vol. III., No. 2, of the *Berlin Beiträge zur Geburtshülfe*, 1874, he reports two cases of vesico-vaginal fistulæ, which had resisted repeated attempts at an operative cure, and in which the surroundings of the fistula were composed chiefly of cicatricial tissue, the vitality of which was extremely low. These fistulæ he united, after paring the edges, by means of alternate sutures of silver-plated copper and of iron wire, with the object of stimulating the low vitality of the parts, and in both cases with perfect success. That the supposed galvanic action of these sutures is not purely imaginary, was demonstrated by his colleague, Prof. Hällstén, who found that when a silver and iron wire suture were connected with the galvanometer, the maxim deflection of the needle of that instrument was 90°, the average deflection 35°; when, on the other hand, the galvanometer was connected with two iron or two silver-wire sutures, the maxim deflection was 15° to 20°, the average about 0°. This latter result would prove that every metallic suture, when bathed in the vaginal and vesical fluids, acquires a certain degree of galvanic power. Only a series of operations performed on cases which had previously withstood all attempts at cure by the ordinary suture, would, of course, absolutely prove the value of this method.—*Amer. Journ. Obst.*, Aug., 1875.

A REMARKABLE CASE OF WORMS—(From the *White Cloud Chief*).—An old man named Christel Poff, of German descent, living in Missouri, in the locality known as "Cracker's Neck," has been for years afflicted with a disease, which took the form of inordinate thirst, that water would not allay. He grew worse from year to year, until finally he became partially insane, and imagined that all manner of reptiles were after him. About this time a celebrated physician of the Uroscopian school happened to be in the neighbourhood, and was called in to examine the case. Having applied the tests used in his practice, he pronounced it a chronic case of worms, and immediately set to work to compound a remedy from well-known vegetable medicines. The mixture was composed of equal parts of castor-oil, wormwood, tansy, rue, and assafœtida. After administering repeated doses of this compound, he finally succeeded in starting the patient to vomiting, when the whole cause of his disorder came to light. He threw up ten fish worms, three lamprey eels, seven crawfish, one mud turtle, five lizards, two tree frogs, one bull snake, a section of a snake fence, and the worm of a copper still containing sixteen coils. He at once complained of being better, and has steadily improved ever since. He has no idea how or when these things got into his stomach, but remembers having taken a drink of water when a boy, which act was performed by lying on his stomach.—*Canada Medical and Surgical Journal.*

SMOKING IN THE WARDS.—There are smokers and smokers, from him who gets through a cigar and a box of matches in a week, to the soldier who puts his *brûle-gueule* to his lips on waking, and drops it under his bed as he drops off to sleep at night. I remember being told of one such in hospital, where tobacco is strictly forbidden (and where it would be more sanative than all the beastly drugs of the Pharmacopœia, as was fairly proved in the Franco-German war), who was enjoying a surreptitious pipe sitting on his bed, which was next to the door, when the doctor and hospital-sergeant unexpectedly visited the ward. He had just time to withdraw the pipe, but the doctor too surely scented the last whiffs still curling in the corner. Our delinquent denied the charge with the coolness of an old soldier also an old smoker, and was vainly searched for the pipe. At length the puzzled doctor, quite sure of the atrocious crime he was quite unable to prove, guaranteed absolution and non-forfeiture of the pipe if the criminal would but confess and tell where he had secreted it. "Then, it's yourself you ought to be searching, doctor, and not me; for it's you is guilty of having a pipe in hospital," said the hardened one, and said sooth; for he had deftly dropped it at the critical right moment into the gaping side-pocket of the doctor's shooting-jacket, as the latter half-passed at first before turning on him.—*Cope's Tobacco Plant.*

"LET EACH MAN LEARN TO KNOW HIMSELF."—Self-examination and meditation are always beneficial. The former can now be carried out more completely than ever before by the aid of a new apparatus devised by Dr. Grünfeld, of Vienna, which enables each man to examine his own urethra completely, and without inconvenience, or expense worth mentioning. The inmost parts can also be shown to a friend if desired. For particulars see the *Allgem. Wiener Med. Zeitung*, No. 36, 1875.

IN the *Klin. Woch.* Dr. Pincus recommends weak alkaline washes to arrest baldness. Solution of potash (1 to 500), or of its bicarbonate (15 grs. to the ounce), may be employed, 2 or 3 drachms being well rubbed into the scalp daily, and after a time less frequently. He continues the treatment for a year or more.

DR. HENDERSON (*Indian Medical Gazette*) says that the yellow colour of the Anglo-Indian arises from the constant use of curry, which he says is coloured with turmeric. He says that turmeric is such a powerful dye that it will in a short time stain even the bones.

A RECENT French writer says that decoction of logwood has strong antiseptic properties.

THE *Boston Journal of Chemistry* says that the good results of systematic training in hygiene under a regular professor are shown at Amherst College by the fact that there is a large and constant decrease in sickness from the beginning to the end of the College course, the fresh men being always the most sickly, and the seniors the most healthy class.

THE *New York Medical Record* says that two cases of pericardial inflammation occurred at the Bellevue Hospital whilst the urine of the patient was alkaline.

ON the occasion of the meeting of the Society of German Anthropologists in Munich last month, the president, Prof. Virchow, was entertained at a splendid supper by the members of the Ærzliche Verein, in Munich. The entertainment was a great success. The honoured guest referred in the warmest terms to the year he had spent in the little Bavarian city of Wurzburg, before he was summoned to Berlin, as there he had not only been enabled to carry on much work, but had the good fortune to become the friend of many now leading medical men in Bavaria.

A NEW hospital, called the Crown-Prince Rudolf's Hospital for Children, has recently been opened in Vienna. It contains 60 beds, but twice that number can be put up if required. The hospital is due entirely to the munificence of Herr Iguaz Ad. Mauthner and his excellent wife and children.

THE Official Report states that during April in the combined Prussian, Saxon, and Wurtemberg armies 8·9 (= 32,253) men were under treatment for disease. Of these 144 died, 20,556 recovered. Phthisis caused 38, pneumonia 32 of the deaths (= 50 per cent. of total deaths), and 23 were fatal cases of typhoid.

OBITUARY.

BALLENDEN.—On the 24th August, at Sedgley, Staffordshire, J. H. Moffat Ballenden, M.R.C.S.E., aged 33.

BARTON.—On the 25th August, at Aldborough, Norfolk, Keith, the infant son of Samuel Barton, M.B., T.C.D.

BURROWS.—On the 20th August, at Normanton, Thos. Ash Burrows, L.S.A., aged 66.

CHILVER.—On the 15th August, at Upper Brunswick Place, Hove, Brighton, T. F. Chilver, F.R.C.S.E., aged 70.

COCKS.—On the 19th August, at Yew Bank, Broughty Ferry, Dundee, Robert Cocks, M.D., aged 64.

COMMINS.—On the 21st July, at Bombay, while on his journey to Calcutta, to take charge of a Government emigration ship, of heat apoplexy, Henry Commins, M.R.C.S Eng., aged 38.

CUTLIFFE.—On the 22nd August, at Lambeth Square, London, Chas. Newell Cutliffe, M.R.C.S.E., aged 70.

DILLON.—On the 26th August, at Waltham Terrace, Blackrock, co. Dublin, Thomas Dillon, M.D., F.R.C.S.I., late of Ballinasloe, co. Galway.

FINNEY.—On the 8th August, at Ockbrook, Derbyshire, Chas. White Finney, L.S.A.L., aged 61.

FLEMING.—On the 21st August, at Buxton, Alex. Fleming, M.D., of Birmingham, aged 51.

HENRY.—On the 27th August (at the residence of his brother, Emerson W. Henry, M.D., C.M., Lowther Street, Whitehaven), Geo. Henry, L.R.C.P.Ed., L.R.C.S.Ed., aged 29.

MACKESON.—On the 22nd August, at Church Street, St. Peter, Brighton, H. S. Mackeson, M.R.C.S.E., aged 69.

MAUNSELL.—On the 18th August, at his residence, 69 South Richmond Street, Portobello, D. Toler T. Maunsell, M.D., M.B., T.C.D., M.R.I.A.

WEBB.—On the 10th August, at Kilburn, Thos. E. Webb, M.R.C.S.E., aged 72.

NOTICES.

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THE INTRODUCTORIES.

Once more the introductory lectures in our medical schools have obtained publicity beyond professional circles. Not many years ago their interest was mostly confined to the students and alumni of the several hospitals, and then they consisted chiefly of addresses to freshmen. Now, as the public press has taken to reporting them, some of the lecturers have wisely given their remarks a wider scope. Of this change Dr. Barnes's lecture this year is a remarkable instance. It consisted almost entirely of a direct attack upon the lawyers· He exposed their foolish prejudices against scientific witnesses, and the downright absurdities which linger in our medical jurisprudence, showing that legal precedent is often "nothing more than error upon error crystallised by time." We wish that this address could be forced upon the attention of the judges.

Dr. Corfield took for his subject the importance of sanitary science, telling the students that preventive medicine now demands a considerable share of their attention, and touching on several topics relating to public health which interest both the general and professional reader.

Another lecturer entertained his audience with the proper mode of burial, rather a lugubrious subject for young men just entering upon life, but one of considerable importance nevertheless. Others addressed themselves with good effect to the duties and privileges of students keeping their performances more within the range of the introductory lecture proper.

At two schools there was a distinct reference to the subject of vivisection; one orator deprecated legislative interference as a return to the darkness of the first fourteen centuries of our era; but the second, while admitting the legitimate use of all means of research, seemed not unwilling to protect dumb animals from torture inflicted for mere curiosity, and for exhibiting to new audiences well-established facts. This diversity of opinion well illustrates the feeling of the profession.

Once more at St. Bartholomew's Hospital the introductory lecture has been omitted, and there are not wanting those who desire to see the example followed. We think the abandonment of the annual celebration would be a real misfortune.

It is an occasion to which students look forward with great interest, and which many a grey-headed practitioner still delights in. It is, too, as we have seen, an opportunity for our medical leaders to address the public, and such opportunities are too few for this to be lightly esteemed. Report says that the introductory was only abandoned at St. Bartholomew's on account of the unruliness of a few rough students. From the disturbance that took place this year at one hospital a similar course has been suggested. Would it not, however, be better to insist upon proper order being observed. The persons who attempt to bring their school into disgrace cannot be gentlemen; they are therefore unfit for the profession, and the sooner they are made to leave it the better.

In one case the lecturer himself seems to set an example of disorder, for he began with speaking against introductory lectures, and followed up with a foolish tirade against the profession as a money-getting occupation. Fortunately his lecture came to an end in fifteen minutes instead of an hour; but he contrived in that short time to injure the profession in the eyes of the general public. There was, indeed, a substratum of truth in what he said, but the time and mode of saying it were alike ill-chosen. When a man stands before the public as the representative of the profession, it is a pity for him to endeavour to amuse his audience by playing the mountebank. We hope that such an exhibition may never be repeated.

CHRONICLE.

PROFESSOR DAWSON ON DARWINISM.

At the American Association for the Advancement of Science, Prof. Dawson presided over the Section of Biology, and devoted his address to the doctrine of evolution, of which he is a determined opponent. In this and other respects the mantle of Agassiz seems to have fallen on the learned professor. Our readers will peruse with much interest Professor Dawson's conclusions, which were thus summed up at the conclusion of his luminous address :—

We may formulate a few of the general laws, or, perhaps, I had better call them the general conclusions, respecting life. in which all palæontologists may agree. Perhaps it is not possible to do this at present satisfactorily, but the attempt may do no harm. We may, then, I think, make the following affirmations :—

1. The existence of life and organisation on the earth is not eternal, or even coeval with the beginning of the physical universe, but may possibly date from Laurentian or immediately pre-Laurentian times.

2. The introduction of new species of animals and plants has been a continuous process, not necessarily in the sense of derivation of one species from another, but in the higher sense of the continued operation of the cause or causes which introduced life at first. This, as already stated, I take to be the true theological or scriptural, as well as scientific, idea of what we ordinarily and somewhat loosely term creation.

3. Though thus continuous, the process has not been uniform ; but periods of rapid production of species have alternated with others in which many disappeared and few were introduced. This may have been an effect of physical cycles reacting on the progress of life.

4. Species, like individuals, have greater energy and vitality in their younger stages, and rapidly assume all their varietal forms and extend themselves as widely as external circumstances will permit. Like individuals also, they have their periods of old age and decay, though the life of some species has been of enormous duration in comparison with that of others ; the differences appearing to be connected with degrees of adaptation to different conditions of ife.

5. Many allied species, constituting groups of animals and plants. have made their appearance at once in various parts of the earth, and these groups have obeyed the same laws with the individual and the species in culminating rapidly, and then slowly diminishing, though a large group once introduced has rarely disappeared together.

6. Groups of species, as genera and orders, do not usually begin with their highest or lowest forms, but with intermediate and generalised types, and they show a capacity for both elevation and degradation in their subsequent history.

7. The history of life presents a progress from the lower to the higher, and from the simpler to the more complex, and from the more generalised to the more specialised. In this progress new types are introduced and take the place of the older ones, which sink to a relatively subordinate place and become thus degraded. But the physical and organic changes have been so correlated and adjusted that life has not only always maintained its existence, but has been enabled to assume more complex forms, and that older forms have been made to prepare the way for newer, so that there has been on the whole a steady elevation culminating in man himself. Elevation and specialisation have, however, been secured at the expense of vital energy and range of adaptation, until the new element of a rational and inventive nature was introduced in the case of man.

9. In regard to the larger and more distinct types, we cannot find evidence that they have, in their introduction, been preceded by similar forms connecting them with previous groups ; but there is reason to believe that many supposed representative species in successive formations are really only races or varieties.

10. In so far as we can trace their history, specific types are permanent in their characters from their introduction to their extinction, and their earlier varietal forms are similar to their later ones.

11. Palæontology furnishes no direct evidence, perhaps never can furnish any, as to the actual transformation of one species into another, or as to the actual circumstances of creation of species, but the drift of its testimony is to show that species come in *per saltum*, rather than by any slow and gradual process.

12. The origin and history of life cannot, any more than the origin and determination of matter and force, be explained on purely material grounds, but involve the consideration of power referrible to the unseen and spiritual world.

Different minds may state these principles in different ways, but I believe that in so far as palæontology is concerned, in substance they must hold good, at least as steps to higher truths. And now allow me to say that we should be thankful that it is given us to deal with so great questions, and that in deing so, deep humility, earnest seeking for truth, patient collection of all facts, self-denying abstinence from hasty generalisations, forbearance and generous estimation with regard to our fellow-labourers, and reliance on that Divine Spirit which has breathed into us our intelligent life, and is the source of all true wisdom, are the qualities which best become us.

LEAD POISONING.

M. Malherbe, in a paper read before the Association Française pour l'Avancement des Sciences, discussed the question whether the local paralysis is due to central or peripheric lesions. He believes the lesion to be sometimes central and sometimes peripheric, as the lead poison may doubtless be stored up in the central nervous system until its limits of endurance are overcome and paralysis ensues ; or on the other hand, the poison may directly affect external portions of the body. As a striking instance of the latter he related the history of a workman engaged in hammering sheets of lead, which he held with his left hand. After a few days this hand became paralysed, with loss of feeling and diminution in bulk of the extensors of the forearm, but no symptom of general poisoning. The paralysis was cured in three weeks by the local use of electricity and internal administration of iodide of potassium. He is of opinion that in chronic cases the long-continued use of eliminative drugs should be persisted in, and suggested the use of a special kind of gloves for lead-workers.

GENERAL RULES FOR THE DIETARY OF GLYCOSURIC PATIENTS.

Le Lyon Médical, No. 39, t. xx., sums up as follows the precepts of Prof. Bouchardat on this subject :—

If the urine voided in twenty-four hours exceeds 1½ litre (= 2¼ pints) it is necessary to take as little fluids as possible.

Take little fluid nourishment, such as soups, broths, &c.

Drink little at a time : rincing the mouth with iced water will be found to give relief.

Thirst may be relieved by chewing slowly small pieces of dried cocoa, or better olives, or coffee beans.

Two meals a day (one at 10, and one at 6) are better than three.

Avoid repose and sleep after meals, for which a walk after meals is useful.

Don't go to bed until four or five hours after the last meal.

Abstain from drinking coffee and smoking as much as possible.

INSTITUTION FOR RACHITIC CHILDREN AT MILAN.

X

Dr. Pini, of Milan, communicated to the International Congress of Medical Science, that, with the assistance of the charitable public, he had founded an hospital, or rather school, where he receives, during the day only, children suffering from rickets. He gives them, besides suitable medical treatment, wholesome and strengthening food, makes them practise gymnastics, and returns them to their family in the evening. By this method he states that he has obtained the most satisfactory results.

SMALL *versus* LARGE MATERNITIES.

After a lengthened discussion the following conclusions were arrived at by the Obstetric Section of the International Congress of Medical Science :—

X

1. Urgency of a radical reform in the system of assistance rendered to lying-in women.
2. Complete abandonment of large maternities.
3. Replacing of large maternities by small houses with separate rooms for the object of midwifery instruction.
4. Creation of a house of reserve in the vicinity of the maternity with separate medical attendants, &c.
5. Extension, as much as possible, of assistance of all kinds to pregnant and lying-in women at their own houses.
6. That accouchements at the residences of midwives, at the expense and under the *surveillance* of the charitable institutions, presents the means of gradually suppressing maternities. This measure, desirable at all times, becomes a necessity in time of epidemic.

RADICAL CURE FOR HERNIA.

In the "Transactions of the Texas Medical Society" Dr. Greensville Dowell thus describes his plan for the radical cure of hernia : The only instruments used are a double, spear-pointed, semi-circular needle, with an eye in each point, silver wire, a piece of cork, soft wood, or a roll of adhesive plaster.

The parts being well shaven, three lines are then drawn with a brush and tincture of iodine, parallel to the direction of the hernia orifice, the centre line being immediately over the internal orifice and passing down to the external orifice, if the hernia be oblique inguinal; in other varieties, immediately over the greatest enlargement of the tumour. The needle is then taken hold of by the left hand at its unthreaded end ; then the right hand, with the thumb and forefinger, pulls up the skin and superficial fascia as high as it can be done to the right of the middle line, letting the middle line be just below the point of the thumb. The threaded end is then pushed through the fold held below the point of the thumb and index finger. The fold is then let loose, and the threaded end taken by its point with the thumb and fingers of the right hand ; it is then pulled on until the unthreaded end comes just under the outside line of right side of the operator, and left side of patient. The index finger of the left hand is made to invaginate the integuments as far as possible, and the finger pushed to the right under the left tendon of patient, feeling well the wall. The right hand then raises the needle so as to have its point directly over the point of the finger and a little to the outside of it. The needle is then pushed directly down through the tendon into the peritoneal cavity; at this stage the point of the index finger of the left hand is carried to the right side of the patient, and held under the tendons ; the needle is then moved about to see if it is loose, and turned in its curve so as to carry the curved portion of its point under the invaginated integuments, &c., to about a quarter of an inch of the right tendon ; the end is then brought out on the outside line of the patient's right side ; this is done by pressing down on the threaded end held by the surgeon's right hand. The index finger of the left hand is then taken out and the threaded end let go, and the unthreaded end is taken hold of by the right thumb and index finger of the right hand. It is now gently pulled on until the threaded end comes above the tendon. The point threaded is then reversed, and keeping well down on the tendon, is finally pushed out at the first puncture and pulled entirely out, leaving the two ends of the ligature close together in the same puncture. We have thus put a ligature entirely around the two sides of the rupture with a sufficient portion of the tendon and muscles to give the thread sufficient surface to act on : and now, by pulling on the two ends, the rupture is closed internally, by the replacing of its natural support, and then the ends are tied around a piece of cork or soft wood. If one ligature does not close the opening, so that you cannot push the point of your finger under the wire, another wire is put in in the same way. Before tying the first, you must put in enough to completely close the rupture, and they should not be more than a quarter or half an inch apart.

The operation can be performed from either side, but it is best, in inguinal hernia, to start the needle from the side opposite to the ilio-pubic ligament. This enabies you to push down the needle by the side of the ligament, when, if you started on the side in the second position of the needle, you may go under the ligament.

This method is simple and easy to perform, and is applicable to all external hernia, direct, scrotal, intestinal, inguinal, frænicular, crural, femoral, umbilical, ventral, epigastric, hypochondriac, lumbar, labial, perineal, and hernia in tunica propria cordæ testis and tunica tropaia, cordæ rotundæ (in canal of Nash). The process is the same, and made with the same needle and silver wire. Of course it is not applicable to internal hernia, as diaphragmatic, obturatic, ischiatic, entrocystic, invaginal, vaginal, and rectal, as they cannot be reached without resorting to the *direct method*, which ought to be done in all cases of strangulated hernia, when this needle will much facilitate a closure of the incision.

The wires are to be left in from four to seven days, according to the inflammation of the parts. Lotions of sugar of lead and morphine are to be applied externally, according to circumstances.

ARTIFICIAL RESPIRATION IN APOPLEXY.

Prof. Schiff long ago suggested artificial respiration as the proper treatment, inasmuch as the immediate danger in apoplexy lies in paralysis of the medulla oblongata, and consequent impairment of the mechanism of respiration. By artificial respiration time is given to the brain and medulla oblongata to recover the shock and resume their functions, if not perfectly all at once, still in such degree as to maintain life and make improvement possible. Dr. Corso, one of Schiff's assistants, prolonged the life of a patient, who, but for artificial respiration, must have died within a few minutes after entering the hospital. Dr. Corso thinks a great future lies in store for artificial respiration ; pulmonary diseases, in particular, seem a fertile field for the practice.

COEXISTENCE OF LUPUS AND CARCINOMA.

The interesting fact of the occasional supervention of cancer upon lupus has received fresh confirmation at the hands of Professor E. Lang, of Innspruck (*Vierteljahr. f. Dermatol. u. Syph.*, 1874, p. 165), who records a well-marked instance. He believes that many cases previously recorded were simply examples of the extension of the original lupoid affection, which would render the number of cases in which the combination occurs very limited.

TRUE AND FALSE FLUCTUATION.

Mr. T. H. Bartlett, writing in the *Brit. & For. Medico-Chir. Rev.* "On the Value of Fluctuation as a Sign," says that fluctuation of the most distinct kind may be caused either by the elasticity of muscular fibres or by the displacement of muscle; by the elasticity or displacement of glandular tissue; that this only occurs in one direction, viz., across the fibres of the muscle, or the general direction of the gland ducts; that palpation at right angles to this will differentiate the false and true fluctuation, inasmuch as false fluctuation is felt only in one direction, while true fluctuation is felt equally in all directions; that where different layers of muscles take different directions, care must be taken to palpate at right angles to each layer of muscles.

ESERINE DISCS IN TIC.

Dr. W. Munro, of Cupar Fife, recommends in the *B. M. Jour.* discs containing one twenty-fifth of a kilogramme (milligramme?) (·0006 grain), one-half being sufficient as a rule to remove tic which has no persistent cause, in from five to fifteen minutes. The discs are made by H. Duquesnel (late Vée), 42 Faubourg St. Denis, Paris. He has used extract of Calabar bean with advantage as a sudorific in cases of incipient bronchitis, congestion of the liver, phthisis with dry hot skin, &c., being always able to bring down the temperature two or three degrees, when sufficient doses were used; such dose being for an ordinary adult, one-fifth, or at least one-sixth of a grain, as a minimum, which can be safely repeated every four to six hours till the desired effect is produced, so long as the patient is carefully watched. He remarks that the exceedingly small doses required to act in tic of the eserine (1-3200th of a grain) are a striking fulfilment of the prophecy, so to speak, written by Sir R. Christison exactly twenty years ago (*Edinburgh Medical and Surgical Journal*, July, 1855), that Calabar bean would yet be found to contain a poison more powerful than any yet known.

TREATMENT OF WHOOPING-COUGH WITH CARBOLIC ACID VAPOUR.

In reference to the report of a paper read by Dr. Robert J. Lee on "Whooping-cough and its Treatment with Carbolic Acid Vapour," published in the last number of the Doctor (p. 195), Dr. Burchardt, Oberstabsarzt and lecturer at the University of Berlin, writes that in the summer of 1873 he used the steam of a solution of carbolic acid in water (1½ to 2 parts of acid in 100 parts of water) for inhalations three times a day, with perfect and speedy success, in the treatment of whooping-cough. The same inhalations may also be used with great advantage in other affections of the respiratory organs.

IODOFORM IN CHRONIC SUPPURATION OF THE MIDDLE EAR.

Dr. Rankin draws attention in the *New York Medical Journal* to the fact that, though containing 96 per cent. of pure iodine, iodoform is totally devoid of corrosive properties, and has not the slightest local irritating action. It can be applied to highly inflamed and sensitive tissues without exciting pain; in fact, it acts as a local anæsthetic. Besides possessing the stimulating effect of the ordinary iodine and iodides, it acts as a local tonic, and possesses highly disinfectant properties. A drug possessing so many valuable properties should be of decisive benefit in chronic suppuration of the middle ear, and the highly favourable result obtained in such cases by Dr. R., he thinks justifies us in asserting that in iodoform, properly used, we have a very important agent in checking the chronic discharges from the tympanic cavity. Before using the iodoform, which should be in a finely powdered state, it is, of course, essential to see that all secretion shall have been thoroughly removed from the middle ear, and the parts well dried with cotton on a holder. The instrument used for blowing in the iodoform is an insufflator, similar to that used for the throat, with only this difference, that the tube, instead of being curved, is straight.

SECONDARY AFFECTIONS OF THE HEART.

Dr. Fothergill, in some papers on the "Treatment of Secondary Affections of the Heart," published in the *Lancet*, remarks that in forming a diagnosis of secondary affections of the heart, and determining that the heart symptoms are really consequential to some prior and causal disturbance of the circulation, there are several points deserving of special notice.

1. The attacks of dyspnœa, palpitation, or sensation of heart stoppage are not induced by effort, but come on independently of any exertion. They not uncommonly come on during great quiet, and even when lying in bed. Not rarely they permit of active exertion, which does not tax the heart in this class of cases; whilst in primary affections of the heart effort always—or almost always, to be very safe—reveals the existing adynamy.

2. The pulse is not that of cardiac debility; even when the pulse is very irregular there is a force about it which resists compression, quite different from the irregular compressible pulse of cardiac dilatation. There is indeed the sustained pulse of high blood-pressure in the midst of the irregularity, or intermittency. Not rarely, if the arteries are atheromatous, the irregularity is found along with a full sthenic and powerful pulse—a combination, once well noted, ever afterwards recognisable, though not to be described by words. It is a matter of no slight moment to become familiar with the pulse of these conditions. The feeling of the pulse here is not a mere formal matter, but a measure which often gives valuable indications and directs the line of investigation to be pursued.

3. The first sound of the heart is good usually—loud, clear, and of fair intensity. It preserves its muscular sound and is not simply valvular, and does not approach the second sound in character. When there is much hypertrophy the first sound is loud and long. Not uncommonly there is some reduplication of the first sound from delay in the contraction of one of the ventricles. On examination of the heart, it is found acting well and not giving evidences of lack of power. The rhythm may be disturbed; but there are not evidences of heart failure accompanying the disturbed rhythm.

4. The second sound of the heart is accentuated. This is a most important diagnostic point. In primary disease or debility of the heart this symptom is never found (this accentuation is not to be confounded with the brief but loud second sound of unfilled vessels—often this is only pulmonary); in the forms of heart trouble which are the consequences of some prior disturbance of the circulation, causing a rise of blood pressure in the arteries, this objective symptom is never wanting. The accentuation of the second sound will, of course, be more or less intense according to the rise in the blood pressure. It may be found at both the pulmonary and aortic valves. It is most distinct, however, at the aortic valve; and heard most loudly at the second right costo-sternal articulation. The semilunar valves are closed by the recoil of the elastic arteries; if then the tension in the arteries is increased, these valves will be closed with unwonted force, and their closure produces an accentuation of the normal sound. Such accentuation is ever found in the pulmonary valves when the mitral valve is diseased: here it is the measure of the engorgement of the pulmonic circulation. When heard at the aortic orifice this accentuation may be associated with aortic aneurism (Begbie), with general paralysis of the insane ("West Riding Asylum Reports," 1873), or with the general rise of blood pressure in lithiasis.

Having decided that the cardiac troubles are secondary to some primitive affection of the vascular system, causing a rise of blood pressure, the principles of treatment are as follows:—

1. To improve blood depuration by removing the accumulated products of nitrogenised waste; and this can be best accomplished by a combination of measures. First: to cut down the nitrogenised elements of the food to the minimum, so as to lessen the production of waste products.

Second : to administer potash or lithia in combination with vegetable diuretics, and so to aid in the elimination of waste by the kidneys. This latter action will be assisted by throwing the skin into action.

2. If there be present a certain amount of cardiac debility, the depressant effects of the above treatment may be met by the administration of digitalis along with them.

3. After immediate relief has been furnished it is desirable to administer alkalies together with iron for some time. Contrary to what is indicated in primary debility of the heart, the diet should be restricted, and the amount of nitrogen in the ingesta should be small. (The papers of Dr. Parkes, as to the effect of a non-nitrogenised diet upon the blood pressure, lowering it very remarkably, mentioned last year in the Doctor, are very suggestive as to the diet of persons suffering from secondary affections of the heart.)

4. Active exercise in these cases is rather indicated than otherwise, and the increased oxidation induced thereby is beneficial, while the exertion does not act injuriously upon the heart.

SCHROEDER ON DRAINAGE OF DOUGLAS'S CUL-DE-SAC IN OVARIOTOMY.

At the session of the Physico-Medical Society of Erlangen, held May 10, 1875, Professor Schroeder made some statements on what he declared to be one of the most important questions in operative gynæcology—viz., the drainage of Douglas's cul-de-sac in ovariotomy. His paper was intended for the article on Ovariotomy in the American Edition of "Ziemssen's Cyclopædia of the Practice of Medicine," vol. x. It did not, however, reach New York in season to be printed in that volume, and has, therefore, been published by the *N. Y. Med. Record.* He said that after Peaslee had first recommended draining off the exudation from the abdominal cavity as the most efficient method of treatment in cases of peritonitis, Sims seized this idea, and came to the conclusion that Douglas's cul-de-sac had best be punctured and kept open in every ovariotomy, certainly in all in which a peritoneal exudation was to be expected on account of already existing peritoneal irritation or of extensive adhesions. Nussbaum especially adopts this idea with enthusiasm, and anticipates from it a new curative measure in ovariotomy, and Spiegelberg is also warmly in favour of it. I see, he says, in these views an essential danger for ovariotomy, and cannot recognise the correctness of Sims's deduction. For agreeing as I do with Sims, that most of those operated on succumb to septicæmia, I still cannot concede that the reddish serous exudation plays the dreadful part that Sims ascribes to it; for daily experience teaches us that transudations and exudations in the abdominal cavity have in themselves no tendency to decomposition and the production of septic states. In fact, I have frequently satisfied myself that, even after ovariotomies, the exudation is not the bugbear that Sims considers it. I have three times operated under circumstances where an exudation into the abdominal cavity might certainly be expected, without the occurrence of the least trace of a septic process. In the first case I operated where an exudative peritonitis already existed. After the operation the meteorism and vomiting persisted for a few days, but soon improved, and recovery ensued without any disturbance. In the other two cases, to be sure, death occurred, but only after twelve and fifteen days respectively, and from a complication—viz., tetanus, which was not in any degree dependent upon septic processes in the abdominal cavity. In the first of these cases the whole anterior surface of the tumour had contracted adhesions to the abdominal wall, so that the recognition of the peritoneum and the separation of the tumour from it presented great difficulties. From the extensive surfaces of cicatricial adhesion an exudation would necessarily take place. In spite of this, there was perfect healing of the abdominal wound ; there was no trace of peritoneal irritation, and when death, occurring on the ninth day, furnished the opportunity for an autopsy, the abdominal cavity was found perfectly healthy, and there was no suspicion of a decomposing exudation. In the last case the adhesions were not so extensive as they were firm, and could only be separated with great difficulty. Here there existed a reddish, serous transudation in the abdominal cavity, which constantly reaccumulated even during the operation, and a part of which had to be left in the abdominal cavity. The patient had hardly the least sensitiveness, very little fever, and was perfectly well after eight days. She had a normal temperature and a strong appetite—in fact, showed no septic phenomena at all, death also ensuing from tetanus as before, but on the fifteenth day. Small fibrinous flocculi were, it is true, found in the abdominal cavity upon the intestines, also in a few places small deposits of pus, which could easily be scraped off with the blade of the knife, and in the true pelvis there was a reddish, serous fluid. Notwithstanding, there were no septic phenomena, and she would undoubtedly have recovered had the calamitous tetanus not appeared as an intercurrent disease. Now, how does it happen that in one case an exudation undoubtedly present occasions no disturbances whatever, does not even perhaps furnish slight symptoms of peritonitis, while at another time, with a very slight operation, involving scarcely any injury of the peritoneum, there are associated the most violent symptoms of septic peritonitis? According to my conviction, this difference depends wholly upon whether infection has or has not taken place. In its absence the exudation is perfectly harmless, and is easily absorbed by the peritoneum without irritation ; should it occur, however, the exudation becomes decomposed, or where there was no exudation, a violent peritonitis sets in, which furnishes a rapidly decomposing exudation. If this view be correct, it is evident that our treatment must be directed not to the accumulating secretion, but to the prevention of the infection from which the whole trouble arises. Now, although in spite of all our experiments on vibriones, we still do not know precisely in what the infective substance consists, I am, nevertheless, certain that it is conveyed from without, and that its conveyance is, as a rule, by the hands, the instruments, or other appliances of the operator and his assistants. If, therefore, we wish to ward off the infective substances, we must operate in healthy places, and must attend most carefully to the absolute cleanliness of our hands, linen, clothing, instruments, sponges, &c. ; also, in order to disinfect as far as possible the air which forces its way into the abdomen, it is desirable to operate under the spray of carbolic acid, as is my custom in every case. If with such painstaking exactitude we guard against infection, the exudations do not decompose, and consequently give rise to no septic phenomena. Under these circumstances, then, drainage is unnecessary, and if unnecessary, ought to be omitted, as in any event it makes the operation more complicated, difficult, longer, and more dangerous. I should therefore decide upon drainage during the operation only in case I believed—a state of things which, of course, should not happen—that the patient had become infected, or in case decomposing masses, from some suppurating cyst, *e.g.*, had found their way into the abdominal cavity. Drainage of the abdominal cavity assumes a very different position as a therapeutic measure against a septic peritonitis which already exists. For, although the exudation be neither the original cause nor the only symptom of the septic condition, it must still be conceded that its removal is highly desirable. It is true this is then difficult to accomplish. Douglas's cul-de-sac is easy to puncture only when an exudation is enclosed in it. Then only does a tumour form behind the uterus, which is easy to get at. It is precisely in these cases, however, that its evacuation is not absolutely demanded, for the exudation being encapsulated is rendered harmless, and does not lead to absorption or perforation. If, however, there is a free exudation in the abdominal cavity, it does not bulge forward in Douglas's cul-de-sac.

It is then difficult and dangerous to puncture for fear of injuring the neighbouring parts. The need of it is felt with especial frequency in puerperal peritonitis. But here the neck of the anteverted uterus lies so close to the rectum that we do not know where to make the puncture. In such cases we might think of removing the exudation by incision of the abdominal walls. The abdominal cavity, however, cannot be satisfactorily washed out through a simple incision in the abdominal walls. So the only efficient procedure seems to me, in such cases, is to perform laparotomy, and then to perforate and establish drainage through Douglas's cul-de-sac from within. Perhaps this will yet become the treatment for septic peritonitis, although it requires great confidence to undertake this operation in a woman suffering from general peritonitis. In conclusion, let me once more state my views precisely, that the exudation after ovariotomy is not in itself the cause of the septicæmia, but is, on the contrary, perfectly harmless, unless it decomposes; but that decomposition only occurs after infection, and that consequently the important point is not the removal of the exudation, but the avoidance of infection.

THE SUBCUTANEOUS INJECTION OF CARBOLIC ACID AS AN ANÆSTHETIC AND ANTI-NEURALGIC.

Attracted by the published views of Prof. Hueter, Dr. Hermann Schulz began the use of carbolic acid as a subcutaneous injection, aiming at an antiphlogistic and anæsthetic effect. He has now used it in some forty cases. He uses a two-per-cent. solution of the purest carbolic acid in distilled water. Out of over two hundred injections he has seen an abscess form but once, when the tissues had been lacerated by the sudden movement of a child's head during the little operation. He has had no experience in the use of parenchymatous injections. He believes (*Allg. Med. Cent. Zeit*) that as an anæsthetic and anti-neuralgic remedy these injections may very often be advantageously substituted for narcotics.

TUBERCULOSIS TREATED BY INHALATIONS OF NITROGEN.

Dr. Steinbrück declares that in the first stage the disease is cured with positive certainty by systematic inhalations of nitrogen if used long enough. He does not know whether relapses occur. In the second stage improvement and cures are attained to an extent hitherto impossible. The younger the patient the better is the withdrawal of oxygen borne, and the more certain is the result. In the third stage the inhalations are dangerous. All beneficial treatment of tuberculosis must depend upon quieting of the nervous system. The inhalations are practised in an air-tight cabinet, under the supervision of the physician, and the effects looked for are easier and deeper breathing, with coughing up at first of muco-purulent matter. Subsequently the cough should stop, the pulse and temperature fall, and the nervous system be calmed.

TWO CASES OF RAPID MALIGNANT SYPHILIS.

Dr. E. Guibout reports (*l'Union Méd.*, 61, 62, 1875) that he has seen two cases in which syphilitic rupia was accompanied by continuous fever, great weakness, prostration, serious functional disturbances, and extensive ulceration—all within six weeks of the primary lesion. Moreover, none of the ordinary lighter syphilides had intervened.

TREATMENT OF CROUP.

Dr. Lesdorf contributes to Part 6 of *Memorabilien* the following result of forty years' experience of the treatment of croup: at the outset an emetic is to be given, sulphate of copper in small doses every quarter of an hour (until vomiting is produced) being the best; after vomiting the copper is to be given every two hours in doses of one-eighth to half grain.. The dyspnœa generally ceases after vomiting has once occurred. The administration of copper is to be continued for a day or two until the dry whistling cough has changed its character. A cold compress is to be applied round the neck immediately after vomiting. If the dyspnœa seems not to yield, a vapour-bath is to be given, as follows: a wooden vessel, containing eight to ten quarts of hot water, half to three-quarters of a pint of vinegar, and a handful of meal, is to be placed at the foot of the child's bed, a quilt is then to be suspended over the bed so that one end is to cover the vessel, and the other so arranged that the vapour in escaping must pass over the child's head. A red-hot iron is then to be placed in the vessel and left there so long as it developes the hot acid vapour. This bath is to be repeated every two hours, night and day, while there is any danger. The very best results may be anticipated from this method of treatment, and operative interference, even in acute cases, may often be prevented by energetically carrying it out.

TREATMENT OF CHOREA BY THE ETHER-SPRAY.

The *Courier Médical*, No. 39, contains a notice of observations made on this subject by Dr. Fabry, in the service of Dr. Perroud, of Lyons. This method of treatment was first suggested by Dr. Lubetski, of Varsovia, and has yielded excellent results. The spray is applied with Richardson's, or any similar apparatus, to the whole length of the spine, at first three times a day, afterwards twice, each *séance* lasting four to eight minutes. Ice has an equally beneficial effect, when a piece is rubbed up and down the spine for five minutes. The good effects are due to the action on the excito-motor elements of the nervous centres.

We may inform our *confrère* that Dr. John Chapman, of London, has long since drawn attention to this beneficial action of ice when applied to the spine.

THE TREATMENT OF HYDATID CYSTS OF THE LIVER.

Le Courier Médical, No. 35, gives a *résumé* of a work by M. Desnos on this subject, as follows:—

1. If the symptoms are not urgent it is worth while trying iodide of potassium.

2. At the end of some weeks, if this treatment seems unlikely to be beneficial, operative interference will be called for.

3. Capillary puncture and aspiration seems the most suitable method, to be repeated if necessary, with care. This method may prove curative, as well as being serviceable as a means of diagnosis.

4 Primary or consecutive suppuration of the cyst diminishes the chance of cure by capillary puncture and aspiration.

5. However, when the chances of cure are diminishing, and especially when local or general disorder is becoming prominent, we must not hesitate to open the cyst freely, either by Récamier's method or with a large trocar, the canula to be left in the wound.

6. The operation must be followed by washing out the cyst, the injection into it of various solutions, *e.g.*, disinfectants and modifying solutions, such as alcohol and water, solution of chloral and essence of eucalyptus, tincture of iodine, solution of permanganate of potash, &c., with which bile might be combined, as its poisonous action on hydatids has been established by Professor Dolbeau.

7. The employment of electricity is also open for trial. If it is effective, it would seem the most suitable agent for treating this disease.

TREATMENT OF SACCHARINE DIABETES WITH OPIUM.

Prof. Duchek (*Wiener Med. Press*) considers that the failure of opium in the treatment of glycosuria is too frequently due to its not being administered in sufficiently large doses, and recommends that as much as 0·60 to 0·80 centigrammes of the watery extract of opium, or 0·15 centigrammes of morphia should be given daily. Among fourteen diabetic patients he has thus treated he has obtained some good results. It is comparatively slow in producing narcotic effects, and borne well by the patients. The obstinate constipation it produces is its great drawback, but this he recommends to be overcome by the use of aloes, rhubarb, podophyllin, &c.

THREE CASES OF RUPTURE OF THE LIVER IN NEWLY-BORN INFANTS.

Dr. Pincus records in *Eulenberg's Vierteljahreschr. f. gericht. Med.*, xxii., 1875, three observations of rupture of the liver accompanied with effusion of blood into the abdominal cavity. Death occurred in one case from rupture of the organ alone, and in the others asphyxia accompanied it. The considerable quantity of blood effused proved that they were the result of criminal proceedings. Besides, rupture of the liver could not be produced accidentally by the pressure exercised on the abdomen at the time of birth, or from ligature of the umbilical cord.

CONJUNCTIVAL CHEMOSIS AS A SIGN OF MENINGITIS.

Dr. Fieuzal brought before the meeting of the Société Médicale de l'Arrondissement de l'Elysée of the 5th July last, a case, reported in *Le Progrès Médical* of Sept. 18, of acute meningitis in a child three months old, accompanied with very marked serous chemosis of the conjunctiva, and œdema of the lids of the right eye. This appearance was noticed on the first day, and had proceeded to such an extent on the third that the lids could not be raised, whilst a portion of the swollen conjunctiva extruded between them. By means of the continuous application of cold compresses, and a weak astringent lotion, the œdema and chemosis disappeared on the fourth day. Convulsive oscillatory movements of the eyes then set in, accompanied with recurrent attacks of paralysis of the sixth nerve of the right sight and internal strabismus, alternate contractions and dilatations of the pupils, spasmodic movements of the lips, and slight trismus. An ophthalmoscopic examination revealed a state of venous congestion and retinal œdema, but no choroidal tubercles. These symptoms were rapidly followed by those of compression of the brain, and the child died on the fifth day of the illness.

Dr. F. attaches great importance to chemosis as a sign of rapid effusion, and one not mentioned by writers on the subject. He grounds his explanation of the mode of its production on the experiments of Schwalbe, who found that liquid injected into the sub-arachnoid space found its way into the interval between the external and internal sheaths of the optic nerve, and escaped thence into the sub-conjunctival cellular tissue, producing retinal œdema, chemosis, and palpebral œdema. Dr. F. considers that the strangulation of the nerve-fibres caused by the pressure of the liquid in the inter-vaginal space is a sufficient explanation of many phenomena hitherto unexplained; and also that the conjunctival ecchymosis, observed in some cases of fracture of the base of the skull, occurs in a manner similar to the serous chemosis.

OF THE PART PLAYED BY PARASITES IN DIPHTHERIA.

The conclusions arrived at by M. L. Gabriel Duchamp regarding the part played by the parasite peculiar to diphtheria, which he has recognised by means of the microscope, are stated as follows (*Le Mouvement Médical*, Oct. 2nd):—

1. The false membranes of croup transferred from the larynx of man into the larynx and trachea of the rabbit can give origin to the diphtheritic process.
2. In the absence of false membranes the products (bacteria, vibriones, &c.) collected in the larynx of a man suffering from croup, and transferred to that of the rabbit, appear to lose that peculiarity, whilst they are very noxious.
3. The injection of false membrane from the larynx of man into the jugular vein or cellular tissue of the rabbit appears to constitute an unfavourable means of reproducing the diphtheritic process. One of the subjects of experiment died from phlebitis following pyæmia, and the other from a form of septicæmia.
4. Reinoculations appear to weaken the noxious properties of the virulent elements. In the experiments that were made from rabbit to rabbit the results were constantly negative.
5. In the absence of false membranes, the products collected in the larynx of man and put under the epidermis of the rabbit did not provoke the development of the diphtheritic process in the latter animal; it survived without accident.
6. The cutaneous inoculations of false membranes of the larynx of man have given equally negative results in the rabbit and the horse.

EARLY USE OF HORSE-FLESH.

In the first siege of Metz in 1552 the flesh of horses was freely eaten, as may be learned from the *Chroniques Messines*. Ambrose Paré, who was an eye-witness of the fact, also mentions it in his works (p. 788, edition 1664.)

IS GOUT ONLY CHRONIC?

M. Bouloumie maintains that gout is essentially a chronic disease. Gout is the accumulation of uric acid in the blood, due to an alteration of nutrition that causes the acid to be developed in excess. When this is not carried off with sufficient rapidity what is called an acute attack of gout supervenes.

ARSENICAL PARALYSIS.

Dr. Scolosaboff, of Moscow, has had the opportunity of observing two cases of this rather rare disease. The paralysis affected the extremities exclusively, and was more marked at the part furthest from the heart. The cases were marked by (1) alterations of all kinds of sensibility; (2) extreme muscular atrophy, with loss or diminution of electro-muscular contractility, both faradic and galvanic; (3) alteration of the circulation and nutrition in the extremities, as proved by decrease of temperature, œdema, change of colour, &c.

We may remark that gangrene of the extremities has been seen in similar cases to those recorded by our Russian *confrère*. Arsenical paralysis resembles in some respects that caused by lead, while in others it is not unlike poisoning by ergot.

THE TREATMENT OF CHOREA BY ARSENIC IN LARGE DOSES.

In consequence of the recent comments of Drs. Eustace Smith and John K. Spender, and of Messrs. Jones and Gaskoin, Dr. Bradbury, of Cambridge, resolved to give arsenic in large doses a fair trial. Finding, however, that even medium doses (five and six minims) thrice daily did harm rather than good, Dr. B. did not resort to the large doses recommended by Dr. Smith, and he cannot but think that it is a mistake to treat all cases of chorea by any single remedy. Each case must be treated upon its own merits, the predisposing and exciting causes of the disease being especially inquired into; indeed, the more Dr. Bradbury saw of the practice of medicine, the more he felt the great importance of finding out the *fons et origo mali.* During the past Easter Term, when he had charge of the wards, several cases of chorea came under his care. One got well without any medicine: good food and the discipline of the hospital being all that were required. Another, with amenorrhœa, was cured with Griffith's mixture and compound decoction of aloes given in combination. A third, a woman seven months advanced in pregnancy, who had had two previous attacks of chorea, the first after acute rheumatism, was benefited by cod-liver oil and bromide of potassium; but the disease did not completely subside till she had been confined. Among his out-patients, Dr. Bradbury has had great success with arsenic in chorea, and of all single remedies he considers it the most frequently successful. In one case, however, published in the *British Medical Journal,* it signally failed to be of any service, and this not from any want of tolerance of the drug by the patient. The amendment following the administration of the chloral was very marked, but how much of the improvement was due to the iron it is difficult to estimate. This case of chorea passed from an apparently non-febrile to a febrile state whilst under treatment by arsenic.

ELECTRICITY IN DIAGNOSIS AND TREATMENT.

Dr. Buzzard relates in the *Lancet* the details of electrical examination and treatment in a most interesting case of paralysis of the facial and oculo-motor nerves. He remarks that it is a matter of the gravest import, as regards the prognosis, whether a paralysis of the facial muscles is diagnosed as peripheral or as depending on a lesion of the central nervous system. The importance of this is increased when the patient, as in this case, is a man who has passed the middle period of life; and becomes intensified when, as occurred in this instance, paralysis of one side of the face is followed by loss of power in certain muscles of the eye on the opposite side. Experience, which by this time has been sufficiently universal to make its results positive, teaches us that when there is paralysis of facial muscles, and these a few hours after the attack show a diminution, rapidly going on to an entire abolition of contractility on exposure to induced currents, whilst contractility is effected with abnormal facility by the interrupted voltaic current, the lesion is not a central one, but involves some portion of the portio dura nerve. Dr. Buzzard has seen no exception to this rule. The lesion may result from cold, from wound of the nerve, or from compression, but it is always a lesion of the nerve, and not of the nervous centre. Therefore, when the test applications of the induced and voltaic currents in this case were followed by these results he pronounced the facial paralysis to be of peripheral origin. When, in process of time, the second attack occurred, involving on this occasion the oculo-motor nerve of the opposite side, although in the nature of things the application of electrical testing was not practicable, it was not unreasonable to infer that this also depended upon a similar cause to that which had caused facial paralysis two years previously, especially as isolated paralysis of one oculo-motor nerve is almost always peripheral. There was good reason to exclude the probability of syphilis in this case, and there had not been any sign of gout. His prognosis was accordingly favourable, as regards the question of the site of the lesion, although he could not properly give any decided opinion on the question whether the paralysis would be recovered from or remain permanent. The result justified his expectations.

ACTUAL CAUTERY.

Dr. Brown-Sequard has lately drawn attention to the use of the cautery, and declares it has not yet been fully appreciated. It need not pain much—the less the better in most cases. The minimum of pain is caused by a white heat, which instantly destroys the outer layer of the skin, so that radiation does not penetrate. Jobert de Lamballe and Valleix have the utmost confidence in the cautery for neuralgia. Charcot has found it the best treatment in Pott's disease. If we are not mistaken, Sir D. Corrigan has for many years used it in spinal cases, but we do not know with what result.

Dr. Brown-Séquard would much extend its use in general paralysis of the insane. He firmly believes in the possibility of a cure, provided the morbid alterations, not only of the brain proper, but of the medulla oblongata and of the spinal cord, had not advanced too far. There is a morbid state in which he finds the power of the actual cautery especially great: it is coma. In chorea he had effected a permanent cure by this method within a week, in one case which had resisted all ordinary means of treatment.

The cautery is very powerful in epilepsy, especially when the disease is due to a blow upon the head, or is caused by congestion or inflammation of the membranes of the brain. In summing up the cases of organic or functional disease in which the actual cautery is of service, Dr. Brown-Séquard mentions pain in any region, but especially neuralgia; congestion or inflammation in the brain, the spinal cord, the lungs, the heart, and other viscera; serous effusion into the joints, the pericardium, and the pleura; paralysis agitans; neuroses, especially epilepsy.

The rule to be followed in determining the place of application is to choose that part of the skin which is nearest to the pain. In locomotor ataxy the sensation is referred to the periphery, consequently apply the iron there; but this rule is not absolute. In locomotor ataxy apply the iron to the lower limbs, at the spot where the pain is felt, or over muscles attacked with cramp. In cases, however, of myelitis or of spinal meningitis associated with congestion or inflammation of the fibrous tissue uniting the vertebræ, the best place of application is over the tender spots of the spine.

No special instrument need be used; if the poker is resorted to it should not be applied over a large surface or pressed hard, if it is desired to avoid giving pain. Lines and occasionally points should be made rapidly. The outer layers of the skin are dried up, and fall off after a few days. No sore or scar remains, so that there is no danger of disfiguring the face, or any other part. The most convenient instrument is one consisting of a steel or platinum bulb about the shape of an olive, but much smaller. To act safely in a cavity like the mouth, or on a restricted part of the skin, a very small steel bar or shaft may be used, which, when heated, is pushed inside a protecting bulb.

As regards the frequency of the applications, it necessarily varies greatly. In cases of neuralgia five or six lines are to be made three or four times, at intervals of two or three days. A single application is usually sufficient to allay the pain of locomotor ataxy. This treatment must be repeated many times for inflammations or serous effusions, especially when chronic. In neuritis the method may have to be persisted in for years.

ELECTRICITY AN ANTISEPTIC.

M. Bloch has informed the Société Anatomique of Paris that from numerous experiments he finds that the action of continued currents is to retard the putrefaction of animal tissues. He preserved beef by this means for eight days, when it was found to be perfectly sweet.

Some of our electricians will probably make experiments for themselves on this matter.

RHEUMATISM A SPINAL DISEASE.

Dr. C. H. Tidd, in the *Southern Medical Record,* says that the primary seat of rheumatism must be sought in the *nervous* system, and not in the blood, and that whatever we may find of acid products (lactic) in the blood are only secondary effects, due to the morbid condition of the nervous system, and can only be reached by those agents which exert their remedial influence upon the nerves.

The part involved is the *spinal cord* primarily, and its larger branches with their ramifications secondarily, and especially those branches connected with the brachial, sacral, and sciatic plexus. Rheumatism, he says, is a *constitutional disease*, the inflammation being brought about and maintained in consequence of functional derangement of the spinal cord, which derangement is produced by either active or passive congestion, or perhaps inanition of that important appendage of the great centre of the nervous system, which condition may be brought about by cold, or by any other agency that tends to break down the nervous system.

This theory is not new, as there are many English physicians who hold that rheumatism is of spinal origin; and the article we lately published on spinal arthropathies should be read by all in connection with this subject.

ANEURISM TREATED BY ESMARCH'S BLOODLESS SYSTEM.

Staff Surgeon Dr. Walter Reid has resorted to this plan with success in a case of popliteal aneurism reported in the *Lancet*. He bandaged the limb with the elastic roller, from the toes upwards to the junction of the middle with the lower third of the thigh. It was applied lightly over the aneurism, so as not to compress it. The elastic tubing was then wound round the limb over the highest turn of the bandage, which was now removed. The entire circulation below the tubing was found to be arrested. The limb had assumed a death-like pallor, and gradually lost temperature. The aneurism was of its usual size, and pulseless.

After fifty minutes, the patient complaining of severe pain above the seat of constriction, a Carte's compressor was adjusted to the main trunk at the pelvic brim, and the elastic tubing removed. On raising this compressor a few minutes afterwards, no pulsation was felt in the aneurism; several small vessels were beating strongly round the joint, and the collateral circulation appeared to be established. The compressor was readjusted and left in charge of the patient, who had previously been accustomed to its use. He was ordered to apply the compression lightly and in an intermittent manner, so as not to distress himself. He continued doing this more or less until the evening of the following day, when the apparatus was removed. The tumour had been frequently examined, and was always found to be pulseless and sensibly diminishing in bulk.

The explanation appears to be—the coagulation of blood in the sac, consequent upon its complete stagnation. The aneurism itself probably remained full, but the entire circulation in the parts was arrested, and it is possible that the loss of temperature and that particular condition of the tissues closely allied to death may have had some effect in the formation of the coagulum. How long it may be necessary to keep the limb bloodless in order to produce this result is a question which must be decided by future practice.

Dr. Reid's reason for compressing the main trunk for some time afterwards was that the force of the blood-current might have broken down and washed away the newly formed clot before it had time to become tough and solid, and the sac to contract over it.

NOTES OF A CASE OF GENERAL ATROPHY OF THE RIGHT LIMB, THE RESULT OF A WOUND.

Le Progrès Médical of the 2nd October contains the notes of a case of general atrophy of the right inferior extremity, by MM. Desnos and E. Barié, in a man 56 years of age, which they attribute to injury of the nerves on the dorsal aspect of the right foot. The patient states that his right foot was bruised in 1870 by a cart-wheel passing over it, and producing a slight lameness, which five months afterwards he noticed was becoming more marked, and that his right limb was wasting and becoming shorter than the left. When admitted to l'Hôpital de la Pitié in May, 1875, his condition was as follows:—Right limb 0.04 centimetres (about an inch and a-half) shorter than the left; circumference of right calf 0.02 centimetres, and of the upper part of right thigh 0.07 centimetres less than that of the left; buttock and posterior aspect of right thigh much flattened; walks without hesitation with the aid of a stick; gait not remarkable; right leg soon fatigues, and when standing throws the weight of his body on the left. Flexion of toes of right foot slightly painful; pressure on seat of injury not so; ankle and metatarsal joints intact; sudden flexion of the right knee, sometimes painful, with crackling of the joint; abduction and adduction of the right thigh painful. He is subject to occasional shooting pains of the thigh and leg, and subjective sensations of cold and prickling in the right foot and lower third of leg. The electric contractility of the muscles of the right limb slightly diminished, especially those on its posterior aspect.

Of the various theories advanced to explain the connection that exists between injuries of peripheral nerves and subsequent paralysis or muscular atrophy, which do not generally appear till after the lapse of some time, MM. Desnos and Barié give preference to that of Brown-Séquard, who attributes it to the suppression or impairment of a certain influence, trophic influence, exercised by the nervous centres, in the normal state, on the muscles and nerves. They also adopt the views of M. Vulpian that this morbid state is produced by extension of irritation from the peripheral nerve to its nucleus of origin, and thence to the adjacent grey matter, thus determining a centrifugal alteration in the nervous trunk, and subsequently atrophy of the muscles it supplies.

They regard the shortening of the limb as due to atrophy of the bones.

HABITUAL VENESECTION.

An extraordinary case of habitual venesection is reported by Dr. E. Warren Sawyer in the *Chicago Medical Journal* for September. The subject of this habit is a retired clergyman, now eighty years of age. His firm step and keen intellect show an unusual degree of preservation for his advanced years. When seventeen years old, according to the custom of the period, and not for ill health, he was bled for the first time. This habit of spring bleeding, was followed for the next six years. He then became a student, and the change to a sedentary life caused a constant feeling of heaviness, to relieve which he resorted oftener to the lancet, and during the next ten years he was bled from four to six times a year, always losing from ten to fifteen ounces of blood. The frequency of the venesections increased, and for the past forty years the patient has suffered the extraordinary loss of eight or ten ounces of blood regularly every three weeks. He declares that he is always made better by bleeding; that letting a half bowl of blood acts as a stimulant, and has never been detrimental to his health. Until he retired from the pulpit, ten years ago, he was a hard-working minister, and he is to-day still capable of work.

For the past nine months this man has been under Dr. Sawyer's care, who has every three weeks bled him to the extent of from eight to ten ounces. The demand for blood-letting is shown by a dyspnœa which appears during the last three days and nights of the interlude. So extreme is this that the patient is usually obliged to spend the night in his chair, just before his bleeding day. His lips and finger-nails become purple. Bleeding at once relieves the dyspnœa, and the natural colour is restored to the lips and fingers; the man's spirits become lighter, he grows talkative, his voice is no longer husky, and he seems in every respect better. Repeated auscultatory examinations of the heart and lungs have failed to discover any organic disease of the former, and but slight evidence of vesicular dilatation of the latter.

TOPICS OF THE TIME.

SALICYLIC ACID.

Numerous articles have of late appeared in both British and foreign journals on the subject of salicylic acid and its various uses. The acid has long been known to scientific chemists as a rare and curious vegetable acid. The peculiar characteristics and reactions of the acid and its salts—the salicylates—have been known for years; but it is only quite recently that it has sprung into use as a therapeutic agent.

We propose in these columns to give a brief *résumé* of what is at present known concerning this acid, its salts, and their various uses and therapeutical applications. Before doing so, however, we must not omit to state that, as in the case of all new proposals, many assertions have been made which it would be difficult to substantiate. In fact, there are already signs of reaction, or, at any rate, of a disposition to question its powers. This is seen in a paper by Mr. Rother in the *Tennessee Pharm. Gaz.* (reprinted in the *Pharmaceutical Journal* for Oct. 16). Mr. Rother declares that salicylic is far inferior to benzoic acid as a disinfectant; that he had found it inefficacious for the preservation of fruit juices, milk, &c., and he disputes the statements of Kolbe and others. The experiments of Salkowsky seem to support Mr. Rother.

Salicylic acid is found along with the aldehyde in the oil of *Spiræa ulmaria*, also in the oil of wintergreen (*Gaultheria procumbens*) as the methyl compound. It is isomeric with oxybenzoic and paraoxybenzoic acids, from which acids it is readily distinguished by its behaviour with ferric chloride, &c., &c. The formula $C_7H_6O_3$ has been ascribed to it. Thus, with regard to its chemical constitution, it is simply phenol or carbolic acid *plus* one molecule of carbanhydride—$C_6H_6O + CO_2 = C_7H_6O_3$. Its easy decomposition into, as well as formation from, carbolic acid and carbanhydride is thus explained.

Salicylic acid may be obtained by many different processes, but the following are the three chief methods of preparing it:—

1. By warming oil of wintergreen with potash lye, it is converted into methyl alcohol and salicylate of potash. Hydrochloric acid is then added to the solution; salicylic acid is precipitated and purified by recrystalising it from hot water. This is Wohler's method.

2. By dissolving phenol or carbolic acid in strong soda lye. The saturated solution is evaporated down until a dry powder (sodium phenylate) is obtained. This is then heated to 100° and dry carbanhydride passed over it. The temperature rises to 180°, and then phenol begins to distil over. The process is finished when the temperature has risen to 220° or 250°, and phenol has ceased to come off. When the retort is cool its contents are dissolved in water, the aqueous solution acidified with hydrochloric acid, heated to drive off carbolic acid, filtered, and allowed to cool: salicylic acid crystalises out. This is Kolbe's method, and the manufacture of the acid on a large scale by this process has been undertaken by Dr. von Heyden of Dresden. This method is more economical than Wohler's.

3. By passing carbonic acid gas or carbanhydride through a solution of carbolic acid until the latter is saturated. Salicylic acid is then formed. The reaction which takes place may be thus expressed:—$C_6H_6O + CO_2 = C_7H_6O_3$. Most of the commercial acid at present in use is prepared by this method. It has the advantage of being a comparatively cheap method for preparing salicylic acid, but the acid thus prepared has at least one disadvantage—viz., that it is probably more liable to decomposition, resolving itself into the substances from whence it was obtained. This is, of course, very objectionable, especially when the acid is used to preserve meat, milk, or vegetable infusions. One of the chief advantages of salicylic, as compared with carbolic acid, is the absence of odour attending the use of the former—an advantage which is, of course, at once removed if salicylic acid is shown to be liable to spontaneous decomposition in the way mentioned.

Salicylic acid occurs in colourless, odourless, monoclinic prisms possessing a faint metallic taste which is barely perceptible. It dissolves in 300 parts of cold water, in 4 parts of alcohol, in 50 parts of hot glycerine, and in the same proportion. It is much more soluble in hot than in cold water and remains in solution on cooling, so that by dissolving the acid in hot water and setting the solution aside to cool a much stronger solution can be obtained than it would be possible to get by dissolving the acid in cold water in the first instance. Its solubility in water is much increased by the addition of phosphate of sodium. If 3 parts of phosphate of sodium be added to the solution 1 part of salicylic acid requires for its solution only one, instead of three hundred parts of water. J. Müller (*Berlin. Klin. Wochens.*) says that glycerine aids its solution in water, so that this will take up one part to three hundred, provided the acid is first dissolved in twenty parts of hot glycerine, and this mixed with eighty parts of water. Dr. C. R. C. Tichborne (*Medical Press and Circular*) says that three grains of salicylic acid dissolve easily in one fluid ounce of glycerine when warmed, and remain dissolved. He proposes the use of this solution. Dr. H. Bose, of Berlin, in a paper in the *Berliner Klinische Wochenschrift*, says that the solubility of Salicylic acid in water is much increased by the addtion of borax to the water. If 8 parts of borax be present, 100 parts of water will dissolve 10 parts if the acid. The solution should be made by first dissolving the borax with the aid of heat and then gradually adding the salicylic acid to the boiling solution. Dr. Bose says that only a portion of the salicylic acid is converted into salicylate of soda.

The acid fuses when heated to 150° C. At a higher temperature it gives off phenol, and if heated with ground glass is completely resolved into carbanhydride and phenol.

Solutions of it give a deep violet colour when treated with ferric chloride.

PHYSIOLOGICAL ACTION.

As far as at present known, salicylic acid, when taken internally, produces no noxious effects on the alimentary canal with the exception of a slight degree of constipation. It passes into the circulation very rapidly, and may be detected in the urine within two hours of its administration. The urine of patients taking it has a decided odour of *Spiræa ulmaria*, and gives the characteristic violet reaction with ferric chloride. It is stated to render the urine acid. Dr. Paul Fürbinger has shown that it does not lower the temperature of a healthy animal.

THERAPEUTIC APPLICATIONS.

Professor Thiersch, of Leipzig, was the first to employ salicylic acid in surgery, and has obtained the best results from its use. His experience extends to 160 of all kinds of surgical cases treated during the past year. He found that by the use of salicylic acid cases of pyæmia were much diminished: erysipelas was not affected. He has found that granulating wounds upon which a solution of one part to three hundred has been sprinkled show no signs of inflammatory reaction; if after the acid has remained in contact with the granulations for some time these become covered with a white film of precipitated albumen, the healing process still goes on as usual underneath. Sprinkled upon gangrenous or other foul surfaces in substance, salicylic acid deprives them of odour, and by occasional renewal the deodorisation may be maintained indefinitely. When, however, there is a thick body of putrefying tissue, the acid cannot of course penetrate deeply enough to insure the absence of all smell.

Thiersch (*Volkmann's Sammlung Klinische Vorträge*, Nos. 84 and 85, 1875; and *Philadelphia Medical Times*) is an enthusiastic advocate of Lister's method of dressing wounds, and his accurate and thorough manner of carrying out the plans of the latter are well known. He has, of course, used salicylic acid by Lister's method, and is disposed to give it decidedly the preference over carbolic acid. For one purpose, however, it cannot be used, that is, for disinfecting surgical instruments, since it oxidises steel with great rapidity.

Thiersch (*Volkmann's Sammlung Klinische Vorträge*, Nos. 84 and 85, 1875; and *Philadelphia Medical Times*) has devised a salicylic wadding for hermetically sealing wounds treated by the antiseptic method; it is composed as follows: Two ounces of salicylic acid are dissolved in two pints of alcohol of specific gravity .83, and the solution diluted with twenty pints of water at a temperature of 70° c. to 81° c. (158° to 178° F.) Six pounds and eight ounces of "cotton batting," after being first deprived of oily matter, are saturated with this solution. When dried, this wadding contains about three per cent. of salicylic acid. Another wadding employed by Thiersch contains ten per cent. of the acid.

The cotton wadding thus used by Thiersch has one disadvantage, it is slightly less permeable than it should be, and therefore, in cases where the discharges are abundant, these are apt to form collections under the dressing instead of soaking into it. To avoid this, Thiersch uses jute impregnated with salicylic acid in profusely suppurating wounds. This, though coarser than cotton, is much more permeable.

In a series of papers on the various organic disinfectants, Drs. Vajda and Heymann (*Wiener Mediz. Press* and *Philadelphia Medical Times*) say that the disinfectant effect of salicylic acid might have been anticipated from its chemical relation to carbolic acid, but its superiority to this agent in many respects is surprising. While the continued use of carbolic acid brings on such local symptoms of reaction as burning sensations, rise of temperature, and redness, none of these symptoms were produced by the use of salicylic acid under precisely similar circumstances. Even in a case where the cavity of a large abscess had been repeatedly washed out with a two-and-a-half per cent. solution of salicylic acid, much of the fluid necessarily remaining in the cavity, no disagreeable effects were produced. Neither have any of those general unpleasant symptoms been noticed, such as headache, feverishness, and the like, which are observed after long-continued use of carbolic acid. In dressing large superficial wounds with salicylic acid no unpleasant general effects have been observed, although the fact of its absorption is shown by a green colouration of the urine. In markedly infecting wounds salicylic acid is useless, while carbolic acid and its congener cresylic acid neutralise their effect. This is probably due to the cauterising influence of these latter agents, since when they are used in a diluted condition they likewise are found to fail.

According to the most recent researches of Kolbe, salicylic acid only preserves its antiseptic properties while it is in the free state: it loses it the moment it combines with soda. Hence it should not be administered at the same time with alkalies, or while the patient is undergoing alkaline treatment. Carbolic acid does not thus lose its virtues when combined with alkalies. This forms an important distinction between these two acids which resemble each other so much in other particulars. M. Maury has shown that salicylic acid does not lose its antiseptic power by combining with quinine to form the salicylicate of quinine, although this compound is somewhat weaker as an antiseptic than the pure acid; and Dr. Tichborne has proposed salicylate of lead as a therapeutic agent.

The *New York Medical Journal* says that a solution of salicylic acid (containing 1 part in 500 of water) has been employed with great advantage as an injection into the bladder in cases of chronic cystitis. The method adopted was to make 4 injections of 1 ounce each every morning and evening. The acid not only removed the offensive smell of the urine, but also, in a short space of time, freed it from pus.

We have previously mentioned that salicylic acid renders the urine acid. Dr. Paul Fürbinger has used it for this purpose in catarrh of the urinary organs. In the *Berliner Klinische Wochenschrift* he relates four cases in which salicylic acid was used internally to combat alkaline fermentation of the urine. In all the cases the urine acquired an acid reaction, the sediments cleaned, and there was a diminution in number of, and death of, the bacteria previously found. Dr. F. concludes that salicylic acid administered internally in relatively small doses (about 15 grains daily in a mucilaginous draught) prevents alkaline fermentation in the urine, but that it does not prevent the formation of pus in the urinary passages.

Experiments upon the internal and hypodermic use of salicylic acid have been made by Dr. Paul Fürbinger (*Centralblatt f. Med. Wissen.*, No. 18, 1875, and *Philadelphia Medical Times*). In the normal condition no lowering of temperature was observed after its administration.

Septic fever was then excited in animals, and the experiments repeated. The acid was administered in doses of ·05 to 0·2 grammes (to rabbits), larger doses being found to produce toxic effects.

In these experiments the acid, when administered, was found to have marked antipyretic powers, the temperature falling very perceptibly in from two to six hours subsequent to its administration. In one case where toxic effects had been produced in a rabbit by an over-dose, the symptoms were those of collapse, and the necropsy showed the cause of death to have been diffuse peritonitis, brought on by extensive corrosion of the lower bowel.

Dr. E. Butt, of St. Gall (*Centralblatt f. Med. Wissen.*, No. 18, 1875), has employed salicylic acid in various cases of typhoid fever, erysipelas, and acute articular rheumatism with very good results; but the number of patients under his observation has been too small to allow great weight to be attached to his results. He believes salicylic acid exercises a marked antipyretic effect, and is even inclined to place it on a level with quinine in this respect. No disagreeable effects were noted by him. Dr. Butt promises further details on the subject.

Dr. E. Stephanides, Medical Officer to the Lower Austria Lunatic Asylum, has (*Wien. Med. Presse*, No. 14, 1875) employed salicylic acid in dysentery and chronic diarrhœa. His experiments extend to only a few cases, in which, however, striking results were obtained.

W. Wagner has used salicylic acid externally in cases of contused wound and recent burns, by strewing a thin layer over the surface, and covering it with cotton-wadding. The healing process appeared to be accelerated. He has found an ointment (salicylic acid 1.5 parts, dissolved in 3 parts of spirit of wine, and rubbed with 15 parts of hog's lard) very useful in atonic ulcers of the foot, and especially in obstinate eczema of the face and head. He also praises a salicylic acid mouth-wash and gargle in cases of ulcerated gum, in sore-throat with abscess, in various forms of stomatitis, and in diphtheria.

Dr. Geo. H. Rohe (*Baltimore Physician and Surgeon*) says that salicylic acid has been much recommended in diphtheria, and he has collected a number of interesting particulars on this head. He considers salicylic acid a valuable remedy in diphtheritic affections. He says that Dr. Wagner has used a solution of the strength of one part to one hundred of water as a mouth-wash and gargle in the various forms of stomatitis, in angina, and in diphtheria. In the latter disease he gives internally from 2 to 5 grains every two hours in water or wine. He has treated with this remedy 15 cases of diphtheria, some very severe ones among the number, without the loss of a single case. Complete disappearance of all local and constitutional symptoms followed in from 3 to 5 days in the milder cases, and in 8 days in the more severe ones. Gargling with the solution in this disease did not appear to affect the progress of the disease to any great extent. It should, however, be employed as an additional aid in all severe cases.

Dr. Wagner considers the effect of the remedy to depend upon its antizymotic properties, destroying the fungus or ferment in the blood, through which fluid it acts when taken internally.

Dr. Fontheim has also used the acid in diphtheria, and thus relates his experience with it in *Memorabilien*:—"Since the end of October, 1874, I have treated 31 cases of diphtheria with salicylic acid, and I do not hesitate to assert that this remedy will answer all demands made upon it in this disease. Of the 31 cases, not one resulted fatally, and the duration of the disease was not more than 8 days in the severest cases; those of a milder type recovered in from 2 to 4 days. I have had no case of diphtheritic nephritis since using this remedy, and paralysis of the throat followed in only one instance. Formerly both paralysis and diphtheritic nephritis occurred frequently as complications of the disease." Dr. Fontheim also gives iron, quinine, wine and nutritious food, and abundance of fresh air. We may suggest that the last portion of the prescription is perhaps the most important.

A teaspoonful of a solution made by dissolving one part of the acid in one hundred parts of water, with the aid of a little spirit of wine, is given every 3 or 4 hours. The same solution is applied to the throat every 3 or 4 hours by means of a sponge probang.

Drs. Hanow, Langfelt, and others, both in Germany and Britain, have also employed salicylic acid in diphtheria.

The chief advantages claimed for salicylic acid as an antiseptic are:—

1. It is antiseptic.
2. It is odourless. This not only makes the application of the remedy more agreeable, but the limit of its effect can be easily measured when used in fœtid discharges, and the amount employed can be regulated accordingly.
3. It is non-irritating when applied to the skin, to wounds, or to granulating surfaces.
4. It is not poisonous when absorbed into the circulation.

Some important observations by M. Wagner on salicylic acid appear in the *Journal für Pracktische Chemie*. They are thus summarised by Dr. Stevenson in the *Journal of the Chemical Society*:—

1. Salicylic acid is superior to phenol (carbolic acid) as a disinfectant for fresh wounds and old sores.
2. A disinfecting action is insufficient for venereal sores, and corrosion is requisite.
3. In eczema of the head and face, with discharge, salicylic acid is extraordinarily efficacious, presumably because it quickly destroys the contagium.
4. In all cases where fermentative changes occur in the contents of the alimentary canal salicylic acid acts more efficaciously than other antiseptic substances, since it can be administered in larger doses.
5. Its use is highly promising as a prophylactic in all diseases in which it is believed that the morbid processes are connected with microscopic organisms. In diphtheria not only is salicylic acid a powerful resto-

rative remedy, but it also appears to shorten the course of the disease.

A correspondent of the *Pharmaceutische Zeitung* writes that, being engaged in making some experiments with salicylic acid, it occurred to him to try how far it could be tolerated by leeches. The first couple fell victims to an overdose, but a third was lively and well at the end of a month, whilst the water did not become foul either in smell or taste. Two other leeches were then placed in 100 grams of water and four drops of an aqueous solution (1 in 300) of salicylic acid added. After remaining two months in the same water, the leeches were quite healthy and the water was fresh and clear. The next experiment was upon 100 leeches, kept in about a litre of water. The water was already turbid, slimy, and ill-smelling, and at the bottom of the containing vessel three leeches lay dead. These were removed, thirty drops of the solution of salicylic acid added, and the vessel set aside. The next morning the foul smell of the water had entirely disappeared, and the leeches were quite lively. The water was then poured off, the vessel purified, and the leeches cleansed and placed in a litre of fresh water to which twenty drops of the salicylic acid solution had been added. Since then the leeches have been healthy, there have been no further deaths, and the water remains sweet and bright. The *Pharmaceutical Journal* says: "These experiments would appear to be worth repeating, and we should be glad to receive any fresh information upon the subject;" and since then Mr. J. C. Thresh has written to the *Pharmaceutical Journal* to say that he has found this mode of preserving leeches effectual.

DIAGNOSIS AND CURE OF DISEASES BY THEIR ODOUR.—THE SMELL OF DEATH.

The use of the nose is too much neglected by most medical men, though a few cultivate the sense of smell. Some also have the sense more highly developed than others, and can distinguish, they declare, various diseases by their odour.

Last August Mr. Spencer Watson published in the *Medical Press* some interesting facts respecting the use of odours in therapeutics, but unfortunately concluded that the absence of any satisfacfory classification of odours is at present against their specific application to the relief or cure of diseases, and until this want is supplied the therapeutical use of perfumes must be very much left in the regions of empiricism.

A little time previously Dr. Little in the same journal spoke of the development of the olfactory nerve as a qualification for medical officers of health. In this very able paper we think we see that this careful and learned physician has paid a good deal of attention to the subject, and we should be glad to learn more from him.

The physicians of Cincinnati, from a late debate at the Academy, seem well acquainted with the smell of death. The subject was started by Dr. Isham, whose paper is published *in extenso* in *The Clinic* of September 4, 1875. We can only give a brief abstract of it.

Dr. Isham was first impressed with this odour in 1863, when he was an inmate of one of the hospitals in Washington. Its character cannot be clearly described, but the basic perfume resembled that of musk, though more subtle and delicate. The odour has not the sour, mouldy character of the cadaveric smell, nor is it a constant accompaniment of death. Usually it is not widely diffused, but comes as a wave of volatile matter. It does not remain long in one locality, and was noticed by Dr. Isham only at a time just preceding the death struggle; never more remote from it than an hour, and frequently not more than from five minutes to half-an-hour. He believes the odour to be due to ammonia and a volatile oil contained in the blood. Near the termination of life, the circulation having ceased in the peripheral vessels, chemical changes take place in the blood, exalting its temperature and liberating the volatile principles which are present in the devitalised fluid, and so giving rise to the death smell.

The experiments of Lange may help to explain why the smell is not appreciable in all cases of death. He found that when carbonate of ammonia was added to living blood, ammonia was given off only at a temperature of from 176° to 194° F., but when added to blood taken from a dead animal ammonia was given off at a temperature of from 104° to 113° F. In many diseases just previous to death the blood temperature is raised to above the lowest temperature given by Lange, and makes it possible for the volatile principle referred to to be set free. In some diseases, on the other hand, the blood heat falls much below the normal temperature, and no smell is diffused.

Drs. Whittaker and Bartholow supported the statements of Dr. Isham, and urged the study of the odours of various diseases.

ON FEELING THE PULSE.

Not long since some medical students complained to us that throughout their career they had never been taught to feel the pulse of a patient, and yet the pulse had been studied from the earliest time. Galem indeed wrote four books about the pulse, and Hippocrates and Herophelos both studied it. Nor were they the first, for we are credibly informed that in this, as in many other things, the Chinese were earlier in the field. (*a*) We believe that Dr. Broadbent is quite wrong in supposing that feeling the pulse was a lost art until the sphygmogragh drew our attention again to it. This statement he made in a good lecture on the subject just published in the *Lancet*, but there are not a few living who possess the *tactus eruditus* which our predecessors relied upon, and which is, after all, of more value than any mechanical contrivance, not that we wish to depreciate the use of the sphygmograph, which in skilled hands is capable of affording much valuable information, but which will never render it unnecessary to study the pulse. It is therefore opportune that, besides Dr. Broadbent's lecture, another has appeared by Dr. Sawyer in the *Birmingham Medical Review*. We

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(*a*) "A Chinese Emperor writ about the Pulse 4,292 Years ago, since which time the Chinese have been Famous for Pulses."—Sir John Floyer, Lichfield, "The Art of Feeling the Pulse." 1707.

propose to gather some points from each of these, and first of all let us take our provincial brother's lecture. He gives the average frequency in a healthy adult male as from 70 to 75, and shows the variations caused by age, posture, time of day, exercise, and other circumstances. In the other lecture the normal rate is put at 72 beats per minute as the average for adult healthy males. It is more frequent in women of about eighty, and especially in children. But a pulse of 60 is often met with; sometimes perhaps of 40 or even less, or, on the other hand, of 90 or 100. These figures are certainly wide enough. Having pointed out the manner of feeling the pulse, Dr. Sawyer gives an account of its characters from a clinical point of view.

Though the *frequency* of the pulse usually corresponds to that of the heart, Dr. S. says in certain diseases of the heart the cardiac pulsations may be so weak that some of them are not communicated to the wrist, and thus the radial pulse may be less frequent than the cardiac. The pulse may become very infrequent. Piorry records a pulse of 17; in a case of fatty degeneration of the heart I have noted the pulse as low as 25 beats in a minute. The terms quickness and frequency, as applied to the pulse, are often erroneously used as synonymes. When the pulse is *frequent*, an unusually large number of beats occur in a given time; when the pulse is *quick*, each stroke is short and abrupt. The *frequency* of a pulse has reference to the number of its beats; the *quickness*, to a special characteristic of each individual pulsation. The opposite of the *frequent* pulse is the *rare* or infrequent pulse. The opposite of the *quick* pulse is the *slow* pulse. The terms frequent and rare refer to the number of pulsations in a given time; the terms quick and slow refer to the time of the pulsation itself, to the time during which the pulse dwells under the finger.

Irregularity does not refer to frequency alone; the pulse may be irregular as to force and size as well as to time. Irregularity of the pulse is natural to some persons. (a) If the pulsations are irregular as regards their size and force, they are said to be *unequal.* The pulse may be *intermittent.* This occurs when a pulsation is omitted at intervals. Some writers inaccurately limit the meaning of the term to the cessation of a pulsation arising at regular intervals. Sir Thomas Watson says:—"Irregularity of the pulse may be caused by disease within the head; by organic disease of the heart; by simple disorder of the stomach; or it may be merely the result of debility, and the prelude to the complete stoppage of the heart's action from asthenia. How important must it be to ascertain and construe each of these meanings of the same symptom. It may indicate mortal disease—it may imply no danger at all; it may afford no clue to any available treatment, or it may teach us how to ward off impending dissolution."

The terms *large* and *small* have reference only to the *size; strong* and *weak* relate only to the *force* of the pulse. A large pulse is not necessarily strong, neither is a small pulse necessarily weak.

Compressibility we usually measure by the pressure of the finger. When the pulse is incompressible, that is, when we can only extinguish it with difficulty by pressure, it is said to be *hard;* when it is compressible, we describe it as being *soft.* If the pulse be very soft and quick, as it sometimes is in conditions of great prostration, it is said to be be *vermicular* or *fluttering.* When a pulse is small and hard, it is called *wiry;* when it is small, soft, and weak, it is *thready.*

When two pulsations are felt rapidly succeeding each other and corresponding to one beat of the heart, the pulse is said to be *dicrotic.* This pulse was called *bisferiens* and *bisiliens* by the older writers, and is the *pouls rebondissant* of French physicians. The dicrotic pulse occurs in fevers, and especially in enteric fever; it is often met with in the hectic of pulmonary phthisis. A high degree of dicrotism is attained in fevers, diseases in which there is an augmentation of the arterial elasticity, because the contractility of the arteries, almost entirely suppressed in these maladies, does not neutralise, as it does in health, a portion of the elasticity of the vessels.

The pulse may be *jerking* in character, "a distinct fall back following instantly the rise of the vessel." This is the pulse of aortic regurgitation; it results mechanically from a lowering of the arterial tension. This pulse is "leaping;" it has also been called "locomotive," and the "pulse of unfilled arteries." Sometimes we feel that the blood appears to be divided into little balls, which pass in rapid succession under the finger. This pulse is usually regular; it is often markedly *visible.*

Dr. Broadbent, in a prior lecture, considered these definitions. In the second on the subject he pointed out the factors of the pulse and the use of the sphygmograph. He describes the normal pulse as of course of average frequency, regular as to time and equable as to strength, compressible by moderate force, not shooting under the fingers nor lingering long on the touch. The artery ought not to be easily distinguishable in the intervals of pulsation; it should present no irregularities when the skin is rubbed along its course; and especially it should not roll under the fingers like a solid cord, or be traceable far up the forearm. The pulsations ought not to be visible, or at any rate not conspicuous. When there is high tension the artery, usually rather small, but sometimes large, is hard and cord-like; it can be rolled under the finger, and is easily traced in its course up the forearm, where it feels like another tendon lying amidst those in front of the wrist. It reminded Dr. Broadbent of the vas deferens. He went on to say that when the fingers are first lightly placed upon the vessel, the pulsation detected is inconsiderable, and such a pulse on superficial examination is often set down as weak, but let pressure be applied with a view to its extinction, and it is found to be compressible only on the employment of great force. The apparently weak and really slight pulsatile movement is due to the fact that the artery remains full during the diastole of the heart, and is not flattened by the degree of pressure ordinarily applied; not being flattened, the change of shape produced by the increased pressure of the systole is necessarily inconsiderable. The remaining feature of high arterial tension is that, in consequence of the resistance which has to be overcome by the heart, its contraction is prolonged. The expansion of the artery, therefore, is prolonged, and does not quickly leave the finger, making the pulse long. Briefly, then, the pulse is *small*, *long*, and *hard*. And this is the general character of the high tension pulse met with, but there are important exceptions and qualifications which must be mentioned, though they cannot be fully considered here. For instance, the artery is sometimes large, very large; the pulse must then be called large, hard, and long, but the pulsation is not large and free for the reason given. Again, when the action of the heart is weak the pulse may appear to be short.

(a) Sir Thomas Watson: "Principles and Practice of Physic."

The condition of tension is often associated with tough and thickened arteries, especially in kidney disease, and is often mistaken for mere arterial degeneration; but it frequently occurs as a temporary condition in perfectly normal vessels. The conditions giving rise to high tension are classified and enumerated by Dr. Broadbent as follows:—

1. Degeneration of vessels. Of this there are two kinds. In one the artery is usually large, but sometimes small when associated with a weak heart, and as the finger is run along it, it is found to be bulging at different points, and feels thickened. In the other form the vessel is calcareous, and feels like a string of beads; in this form the artery is not necessarily large. He does not think one is simply an advanced stage of the other.
2. Kidney disease; pregnancy.
3. Gout; suppressed gout, or retained nitrogenised waste; lead poisoning.
4. Affections of the nervous system.

Besides these there are various unclassified cases, in which we cannot assign a definite reason for the existence of high tension.

The relation of tension to degeneration was then pointed out, and some interesting cases related in which this condition had given invaluable indications for prognosis and treatment. Dr. Broadbent speaks of returning to the subject. We hope if he does so he will reconsider some of the points he has advanced, and keep his general views a little more distinct from details.

ABOUT BOOKS.

A Practical Treatise on Diseases of the Eye. By Robert Brudenell Carter, F.R.C.S. London: Macmillan and Co. 1875.

This well-got-up volume of 590 pages is a valuable addition to ophthalmology, and ably sustains the *prestige* of the English School of Medicine for sound science and intelligent practice. It is eminently practical in its character. The author states that his object is "to place before the profession in a concise and readable form a general view of the present state of knowledge with regard to the nature and treatment of the more important diseases of the eye." In this he has been most successful. He does not attempt encyclopædic completeness, but will be found a safe guide by the general practitioner and by the specialist in all that relates to the pathology and therapeutics of those forms of diseases of the eye which most frequently come under treatment. The first chapter treats briefly of the anatomy and physiology of the eye. It is hardly equal to the other parts of the book. The representation of the eye in Plate I. is certainly incorrect, showing as it does the iris as a vertical plane, approximating the lens only by its pupillary margin, and forming the anterior wall of a very large posterior chamber. Helmholtz has shown that a true posterior chamber does not exist, and that as the iris is applied to the lenticular surface for a considerable extent, it is arched forward by it, and does not hang vertically, when seen in profile, as the author states. His explanation of the *rationale* of erect vision omits all allusion to the essential influence of association, without substituting a *vera causa* in its place. The imperfections of the eye as an optical instrument are dwelt on at some length, and, we think, sometimes with unnecessary severity—as, *e.g.*, when the iris is deposed from its established position as a tolerably efficient diaphragm for the correction of spherical aberration. Mr. Carter says it acts as one, "if at all, in a very imperfect manner."

But when we come to the practical part of the book, Mr. Carter appears perfectly at home. The chapters on the examination of the eye and the use of the ophthalmoscope are excellent. They are followed by chapters on the principles of ophthalmic therapeutics and surgery. In the former attention is drawn to ocular affections as significative of morbid conditions in the neighbourhood, and the author remarks, "it is, therefore, not too much to affirm that we are familiar with grave changes of ocular nutrition, as ordinary results of remote nerve lesion, which may itself be situated either at the peripheral extremity of a nerve of the other eye, or on the ganglion of the affected eye, or on the sensory trunk on the hither side of the ganglion, or at the unknown and presumably central seat of paroxysmal neuralgia." In speaking of the use of anodynes, he reminds us that, though in general we may expect "no eye will get better while it is acutely painful," still a total absence of pain, *e.g.*, after such an operation as cataract, "points to a torpidity of the nerves which is itself incompatible with speedy healing." The all-important subject of cataract is treated of at length, and the merits of the various methods of extraction are candidly considered. Solution is recommended as the best and safest for infants; complete breaking up and subsequent removal of the lens for children and young persons; while for persons past middle age, owing to the hardness usually attained by the nucleus of the lens, and the danger of serious complications arising from the iris, extraction is to be preferred, couching being properly altogether abandoned. The author is strongly averse to the habit of some operators, to wait until both the eyes of a patient affected with cataract are mature, and then to operate on both at the same time. Transverse corneal section he condemns as not "within the boundaries of legitimate surgical experiment," an incision well in front of the iris (so as to avoid injury to it), and in a plane slightly inclined to it, but not sufficiently so to pass through the centre of the eye, being that approved of by Mr. Carter himself. Space prevents us going further into detail, but we would mention specially the chapters on spectacles, and on squint, as well deserving of general study. The book abounds with important practical hints, fruits borne

only by those who have availed themselves of a large experience, and we congratulate its author on having more than accomplished the task he set before himself.

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SPECIAL DEPARTMENT.

QUARTERLY REPORT ON DERMATOLOGY.

Compiled for The Doctor by H. S. Purdon,
M.D., L.R.C.P.,
Physician to the Skin and Royal Hospitals, Belfast.

HÆMATOMA AURIS.

Dr. Robertson (*Glasgow Medical Journal*, July, 1875) states that the condition known as Hæmatoma Auris, or bloody tumour of the ear, is one met with almost solely in asylum practice. It is not, however, absolutely restricted to the insane, for Dr. Wilks states in his work on Pathological Anatomy that it is occasionally seen in football players, as the result of violence. Hæmatoma Auris consists of an effusion of blood from the perichondrium, the fibrous membrane that invests the cartilage of the ear. This effusion is dark and venous in its character, and continues long fluid. The swelling is usually first seen on the posterior part of the concha, rather above its centre, and thence extends inwards to the meatus, which it occasionally occludes; and outwards over the pinna sometimes, but not generally, as far as the helix. The tumour so formed varies greatly in size in different cases, there being in some only a slight thickening of the concha, while in others the distension of the auricle is extreme, all the normal irregularities being entirely effaced. When thus severe it occasionally bursts, giving vent to a quantity of blood having the appearance described. It does not usually attain its full size till after several days' growth. The integument over it retains its natural colour in the first instance, but should inflammation set in, as in the more severe cases, particularly those that burst, it becomes red and has the ordinary aspect of an inflamed surface. In exceptional cases the inflammation is so high that suppuration takes place, and there may even be gangrene of considerable portions of cartilage. In many, probably in most cases, the cartilage involved in the tumour is somewhat softened, but in milder forms this is scarcely appreciable. Generally after two or three weeks it begins to subside slowly, but the pinna is never restored completely to its natural condition, as after many years it continues irregular and shrivelled in aspect.

The forms of Insanity in which it occurs.—It is not confined to any particular form. Thus it is found in mania, melancholia, and in dementia. I do not remember having seen it in idiocy. Probably it is most frequently met with in the insanity associated with general paralysis.

Its Causation.—A very simple explanation has been given of this remarkable condition by some writers, such as Dr. Wilks, but one which, if correct, would have left me no apology for occupying the time of the reader with this paper. It is that the hæmatoma is the result of violence either self-inflicted or by others. I am satisfied, however, that in most cases this is not the real cause. Certainly some instances have been reported by physicians to asylums in which it seemed to have been caused by an injury to the ear. But in some of these there may not improbably have been a constitutional disposition to this sanguineous effusion at the time of its appearance, so that the slight blow or fall to which it was ascribed was only a secondary and minor agent in its production. At all events, my own experience would lead me to this conclusion. In the course of a long connection with asylums, many cases of it have come under my observation. In not one of them have I been able, either by a careful examination of the patient or by inquiry at attendants or fellow-patients, to find indications of injury to the ear, though obviously where it occurred in acute mania it could not be shown absolutely that no hurt had been sustained by the patients, particularly at night when alone in their bedrooms.

How then are we to account for it? It is, I think, most probably due to functional disorder of the cervical sympathetic, associated with and perhaps resulting from the existing cerebral or cerebro-spinal disturbance. The grounds for this opinion are these: (1.) It not unfrequently appears in both ears simultaneously, without any indication of either having been injured. (2.) In a case of dementia in my own practice, some years since, I observed an effusion of blood under the conjunctiva of the eye on the same side as the tumour of the ear, both effusions having appeared at the same time; and neither ear nor eye showed the least mark of hurt having been sustained. In this case there was no general purpuric affection; nor in any case, so far as I have seen, can the disease be ascribed to that condition of the blood.

PAPILLOMA OF SKIN.

Weil describes, with admirable conciseness, a remarkable case of *inflammatory papilloma of the skin*, a very rare affection. A day labourer, æt. 73, healthy until five years before, had at that time an abscess over the left hip and, a year later, one in the right groin. Each of these opened, and closed after six weeks. Three years ago one appeared in the soft parts of the left buttock, opened in several places, and has since always secreted a small amount of yellowish pus. A year later a small tumour appeared just inside the left nipple, and soon broke, forming a fistula. One year ago a nodule formed about an inch above the *processus xiphoideus sterni*, its integument dark blue. This soon cracked, began to ooze, and changed into a flat cauliflower excrescence, which attained its present size after about four months' growth. The papillary layer is exposed, the papillæ hypertrophied and in many places fused either above or below, the interstices secreting a dark yellow fluid. The border of the patch consists of protuberances, bluish, full of sinuses, painful on pressure, and secreting a pus-like fluid. Microscopically the papillæ are covered by a thick, well-defined layer of epithelium. The papillæ proper are filled with cells and, in many places, pigment granules, and vessels are abundant. The patch gradually spread, but, after being scraped out, healed rapidly by granulations from the periphery.

DIPHTHERIA OF A VACCINATION PUSTULE FOLLOWED BY GENERAL DIPHTHERIA.

The patient in this case was a child aged four months, which, until vaccination, had been perfectly healthy. On the thirteenth day after this operation was performed, an erysipelatous swelling developed itself about the wound, and spread with great rapidity over the entire body. Œdema soon appeared, followed by icterus and petechial exudations, and death took place on the twelfth day of the disease, the twenty-fifth from the day on which vaccination was performed. At the post-mortem examination lesions characteristic of diphtheria were found, and the question arose whether the lymph which had been used had been the conveyer of the disease, or whether the diphtheria had been contracted at the wound, but at a later period. The fact that diphtheria in such cases makes its appearance some days after vaccination has been performed would seem to indicate that it is not inoculated with the lymph; but, to make this point more clear, experimental inoculations on animals were made. From these the following conclusions were drawn:

1. Vaccine which is infected with the organisms which are characteristic of diphtheria is not capable of causing vaccine pustules.
2. The inoculation of lymph which contains such organisms is rapidly followed by local deposits and general diphtheria.

And these experiments show especially:

1. That the lymph which was used in this case was not thus contaminated, or there would not have been a development of a vaccine pustule at the proper time.
2. That the local diphtheritic changes, followed by the disease itself, must be regarded as processes of secondary character.—Dr. Ludwig Letzerich, *Virchow's Archiv.*, B. lxiii.

TREATMENT OF ZOSTER BY INDUCED CURRENTS.

Dr. Fanque recommends the use of induced currents in the treatment of zoster, which is now generally admitted to be of nervous origin.

He recommends that the positive pole be placed upon the vertebral column while the negative pole is placed upon the affected portions of skin.—*Philadelphia Medical Times.*

CURE OF MALIGNANT PUSTULE BY CARBOLIC ACID.

The various means of treatment which have been used in *pustule maligne* may be divided into two classes: those intended to destroy as promptly as possible the charbon virus at the point where it has been inoculated, and those aimed at the prevention of the general effects of the poison. In order to destroy the virus locally, caustics of every kind have been used; while to fulfil the second indication tonics, stimulants, diaphoretics, and sometimes evacuants have been employed. Dr. Estradere has employed carbolic acid both internally and externally with the greatest success in six cases, which are published in the *Bull. Gén. de Thérap.*—*Ibid.*

TREATMENT OF ALOPECIA BY ELECTRICITY.

Dr. Waldenstrom has attempted to remedy the loss of hair from the scalp by this means. He applied in one case one of the poles to the superior ganglion of the great sympathetic, and the other upon that portion of the scalp from which the hair had fallen. At the end of six weeks the hair was replaced. Another patient treated in the same manner showed a not less favourable result at the end of two months of electrisation. In spite of this double success, Dr. W. does not feel authorised to extol the remedy without further trial. He only states his belief that the treatment is a promising one, and hopes it may have a thorough examination.—*Ibid.*

URTICARIA.

In a long and exhaustive series of observations upon the effects of artificial obstruction of the cutaneous circulation in certain diseases of the skin, under the title "*Ueber venöse Stauung in der Haut,*" Auspitz is led to the opinion that in urticaria we have a transitory functional disturbance produced by the reflex transmission of an irritation from sensitive to vasal nerves. It must be considered as undetermined whether we have here a reflex paralysis of the vasomotor nerves which contract, or a reflex irritation of those which dilate the vessels, as Goltz has suggested in his last publication (Pflüger's Archiv., 1874.) The familiar experiments of Loven have demonstrated that stimulation of sensory nerves will produce dilation of the neighbouring arteries; but it has been generally accepted that such transmission could be accomplished only by means of the central apparatus, although the investigations of Schlesinger and Goltz have shown that not only the medulla oblongata but the spinal cord also is to be regarded as the seat of vasal nerve-centres. Auspitz considers it not improbable, however, that such transmission may be effected by means of ganglia situated immediately in the skin and in direct connection with the blood-vessels for the regulation of the circulation. On this supposition we may have produced in urticaria the transient and irregular dilatation of one capillary district with the complimentary contraction of an adjoining one through reflex transmission, without the interposition of the central apparatus. He attributes to the serous exudation, the essential element in urticaria, the varying shades of the wheal, the light colour of its centre and the deeper of its edges, inasmuch as it covers the capillaries with varying shades of thickness.—*Archives of Dermatology.*

FAVUS.

Vincens believes favus and tinea tonsurans to be distinct diseases, depending upon different parasites, and never hybridizing; cites numerous instances of tinea tonsurans observed in calves and horses; quotes Raynal, to the effect that tinea tons may be transmitted from horse to horse, from cow to horse, and from horse and cow to man; quotes Horand, who observed a case of trichophytic onychomycosis contracted from a dog. Vincens made twenty-one inoculations of trichophytic matter upon eight rats, old and young, with negative results, made inoculations with same matter upon four cats, with two positive, one doubtful and one negative result; with same matter upon two dogs, both successful. He inoculated favus matter upon one rat and three cats with positive results in each case; upon two dogs without effect.—*Ibid.*

THE LATE DR. HUGHES BENNETT.

The decease of Prof. Bennett, though not unanticipated, cast a gloom over a large circle which was well represented in the appreciative articles that have been written respecting his life and works. As we have not space for a lengthy memoir, we quote a passage or two from our contemporaries.

The *Brit. Med. Journ.*, in the course of a long obituary, thus sums up his chief contributions to the science and practice of his profession :—

1. He was the principal agent in advocating the use of cod-liver oil in this country in the treatment of tubercular diseases.
2. He was the first systematically and practically to teach histology and the use of the microscope.
3. He was the first to introduce the systematic teaching of clinical medicine, with the aid of all the modern appliances now in use.
4. He was the first to show the great importance of the microscopical examination of diseased organs, and more especially of the great nervous centres.
5. He pointed out the errors in the prevalent method of treating acute inflammations of internal organs, and more especially of the lungs ; and was highly instrumental in leading to the almost entire abolition of bleeding in these affections.
6. He condemned the indiscriminate drugging of patients much in vogue, and especially the too free use of mercury in syphilis and in diseases of the liver.
7. He was the first to record a case of leucocythemia, and, while he did not at the time discern its true character, he contributed largely to its diagnosis and pathology, and also to the application of the discovery to an explanation of the functions of the lymphatic and blood glands.
8. He was one of the first to advocate combined labour in the prosecution of scientific inquiries, and to the principle of grants of money being given by public bodies for that purpose.
9. He contributed to physiology his well-known molecular theory of organisation, which, if not adopted generally, has at all events led to a reconsideration of the question by the upholders of the cell-theory, and to considerable modifications in their views.

The *Lancet* says : Dr. Graves wished for no other epitaph than the three words—" He fed fevers." Dr. Hughes Bennett could not have a better than this : He reduced the mortality of uncomplicated pneumonia to *nil*. He demonstrated, not only the dispensableness, but the injuriousness of the antiphlogistic treatment which had ruled the best minds of the civilised world for ages. Doubtless other physicians were working in the same direction even before Bennett. But he devised a treatment of his own which has given most brilliant results, and he adhered to it and to the pathological views on which it was based so steadily and over so long a series of years as to establish its truth, and so largely revolutionise the practice of medicine in acute diseases. Coming now to the work of Dr. Bennett in regard to the treatment of phthisis—what praise could we give too much to the physician who taught us to treat phthisis, not antiphlogistically, but with fresh air and cod-liver oil ? It is admitted on all hands that this praise is due to Dr. Bennett.

INDEPENDENT DEPARTMENT.

ON THE VALUE OF CONDENSED FOOD, WITH SPECIAL REFERENCE TO LIEBIG'S EXTRACT AND EISLER AND BREDEN'S SOUP EXTRACTS.

The great impetus which the manufacture of " Extracts " and other forms of condensed food has received of late years would seem to imply that these articles supply a desideratum. Their practical value has never been the subject of serious inquiry, though it was reported that during the siege of Paris, when food was getting scarce, the condensed foods were found decidedly unequal to what was expected from them. They may be said to be essentially the products of the advance of chemical and physiological research. Liebig himself was the first who successfully introduced into the market an article which professed to contain in a highly condensed form a very beneficial article of diet, and to possess also the great advantage of cheapness, power of withstanding decomposition, and easy preparation for consumption.

The object of nutrition is to maintain the normal constitution of the body, and enable all its various functions to be satisfactorily carried on. To effect this the food consumed must contain the elements of all the tissues which have to be renovated. By nutriment must be understood not only such articles as beef and mutton, but water, and many others the value of which would be more properly estimated if they were scarce and had to be bought. Hence we see that food must not only contain material for repairing waste of albuminous, osseous, fatty, and other tissues, but water, salts, &c.

Liebig's Extract, one of the most widely known of the so-called condensed foods, is properly not an article of food at all. It contains neither albumen, fat, nor gluten, nor any of those substances, such as starch, sugar, &c., which chemists class together as hydrocarbons. But still its value is undeniable, if employed to supply materials which it contains in abundance. The amount of salts in Liebig's Extract is such that it should be classed among what we have no better name for than " Condiments ; " what Germans call Genussmittel. Under this term are included substances which do not supply the necessary material for constructing tissue, but still render essential service to the processes of digestion, nutrition, and other organic functions. To quote Professor Voit : " For the nutrition of the body (that is, for the maintenance of its structure), a mixture of pure fat, albumen, starch, salts, and water would suffice, and still we would not be satisfied with such food alone ; we complain that such a mixture is tasteless, and object to eat it. All our food, whether animal or vegetable, contains tasty substances which are not actually nutritious, and in such quantities that we cannot readily separate our food from them. What is tasteless, or tastes unpleasantly or disgustingly, does us no good. For instance, even before they are swallowed vomiting may be excited, showing in what close functional connection the stomach stands to the central organ of the sense of taste. If nasty-tasting food can affect the central organ to such a degree, so can nice food, only in an opposite way." " Condiments," using the term in its widest sense, act first of all chiefly on our nervous system, not merely that found in the mouth, but a much wider-spread section of the whole. We know how not only a mouthful of nice food excites the flow of saliva and gastric juice (both of which are highly-complicated processes), but the very sight of something tasty produces similar effects. Such, according to Voit, is the cause of the beneficial effects which, as is well known, a glass of good sherry or a little caviare at dinner produces. A more beneficial and harmless article of the same class is Liebig's Extract. According to Professor v. Pettenkofer (to whom, with Professor Voit, we are much indebted for development of the philosophy of this subject, and to whose *brochure* we refer our readers for much information), the extract as it comes into the market consists essentially of—

a. About 20 per 100 water;
b. „ 22 „ ashes or salts;
c. „ 58 „ organic constituents (extractive matters).

Prominent among the constituents of Liebig's Extract are the soluble salts of muscle, which constitutes the most extensive and perhaps the most actively-worked organ of the body. Now, though it is true that various kinds of food contain a proportion of salts equivalent to that which exists in human muscle, the objection that such articles as the extract are consequently useless is very far indeed from deserving consideration. Common salt is also present in every article of our food, and yet the general voice of mankind incessantly demands large supplies of it in addition to what exists in our food. But apart from the mere presence of certain constituents in the extract, with regard to which our very imperfect knowledge of physiological chemistry pronounces that they are useful or necessary, it is still undeniable that it is felt to "do good," to refresh and invigorate. The chemical composition of tea and coffee is far better known than that of the extract, and yet who would undertake to say that it is the small percentage of thein or caffein to which the beneficial effects of those articles is due? It is undeniable that a pipe of tobacco, a cup of tea, a glass of wine, or a cup of extract will exert the most cheering influence on the exhausted frame, enabling us at a pinch to renew our exertions when thoroughly exhausted; and in the last especially are combined advantages which recommend it as a condiment, though it has no right to be regarded as a food. As Pettenkofer remarks, "meat is no more a substitute for the extract than the extract is a substitute for meat."

The Soup-Extract of Messrs. Eisler and Breden claims other advantages than those possessed by Liebig's Extract. They prepare four different kinds of soup-extract, three of which are partly composed of leguminous fruits—viz., peas, beans, and lentils, and consequently deserve to be classed as foods of a valuable kind. Their composition is as follows:—

T. W. H.

(To be continued.)

IN THE LABORATORY.

REPORTED DISCOVERY OF A NEW ELEMENT.

In the sitting of the French Academy of Sciences, on the 20th September, a communication from M. Lecocq de Boisbaudran was read, announcing the discovery of a new element during the examination of a specimen of blende from the Pierrefitte Mine, Argelès Valley, in the Pyrenees. The extremely small quantity of this substance at M. Boisbaudran's disposal has not permitted him to isolate it from the excess of zinc accompanying it; but he states that some drops of chloride of zinc in which he had concentrated the new substance gave with the electric spark a spectrum composed principally of a rather brilliant narrow violet ray, situated near where the wave length is 417, and another very feeble ray about 404. The discoverer proposes to name this new substance "Gallium."—*Phar. Jour.*

A NEW TEST FOR MORPHINE.

M. Huseman (*Journal de Pharmacie et de Chimie*) gives the following new test for this alkaloid:—The solution containing morphia or any of its salts is shaken up for half-an-hour with concentrated sulphuric acid at a temperature of 100° C. (boiling point) and to the solution after cooling is added a drop of nitric acid or a small quantity of nitrate of potash, chlorate of potash, hypochlorite of soda, or perchloride of iron. A beautiful blue or purple colour at once appears, passes slowly into a blood-red, and at last fades considerably. This reaction does not take place with pure morphine, but only with morphine which has been modified by acting on it with sulphuric acid. By means of this reaction the 1-100th part of a milligramme (= 1-10000 part of a grain) of morphia can be detected. It is true, says M. Husemann, that Fröhde's reagent (a solution of molybdate of soda in sulphuric acid) gives a violet colour in a solution which contains only the 1-200th part of a milligramme, but Fröhde's test gives a similar reaction with papaverine, salicine, and many other organic bodies. Thus Huseman's test, though perhaps less delicate, is at any rate, more reliable than Fröhde's test.

NOTES, NEWS, AND GOSSIP.

The Vienna Medical School.—The *Allgem. Wiener Med. Zeitung* tells us that during the past summer session 1,206 students attended lectures at this great school, of whom 246 were foreigners, England contributing the most, 32, Germany 38. Great as the absolute number is, the authority we refer to states that the number of medical students is greatly falling off. This it attributes to the objectionable arrangements for examination, the undesirable position of the country practitioners, the want of support for the profession from the authorities, and the action of some of the practitioners in Vienna itself.

Dr. Cheyne.—A correspondent (*Brit. Med. Journ.*) says: At the time that Dr. Cheyne and Dr. Winter were the two principal physicians at Bath, they adopted very opposite modes of practice; but the former gave some credence to his prescription of milk-diet by making it the principal article of his own sustenance. On this occasion, Winter wrote him the following stanzas:—

"Tell me from whom, fat-headed Scot,
Thou didst thy system learn:
From Hippocrates thou hast it not,
Nor Celsus, nor Pitcairn.
Suppose we own that milk is good,
And say the same of grass—
The one for babes and calves is food,
The other for an ass.
Doctor, one new prescription try
(A friend's advice forgive),
Eat grass, reduce thyself and die,
Thy patients then may live."

Dr. Cheyne's answer:—

"My system, Doctor, 's all my own,
No teacher I pretend;
My blunders hurt myself alone,
But yours your dearest friend.
Were you to milk and straw confined,
Thrice happy might you be;
Perhaps you might regain your mind,
And from your wit get free.
I can't your kind prescription try,
But heartily forgive:
'Tis natural you should bid me die
That you yourself may live.",

Legacy to the French Academy.—Prof. Démarquay has left by will 100,000 francs to the Academy of Medicine of Paris, to help to provide a suitable building for its purposes. In case the Government should undertake this task, the interest on Prof. Démarquay's legacy is to be given as a prize yearly for the best work on anatomy, descriptive or pathological; pathology, internal or external; or hygiene.

INSECTICIDES.—We lately mentioned some of the best. We may add that the *Industrie Blatter* of Berlin recommends the use of the wild rosemary (*Ledum palustre*) as a substitute for the well-known Persian powder. This plant, whether fresh or dry, will kill lice, bed-bugs, fleas, moths, beetles, and their larvæ, the maggots and blue-bottles, and probably other insects. It is also, adds our contemporary, the best remedy for the bites of mosquito and other insects. A little of the tincture of the plant applied to the bite relieves the itching and pain. If the tincture be mixed with glycerine and rubbed on the skin, it will drive the mosquitoes away.

HOW TO DISTEND THE LOWER BOWEL IN INTUSSUSCEPTION OR OTHER OBSTRUCTIONS.—Some months ago the *Practitioner* told us that Dr. Douglas Morton injected into the bowel of a young infant believed to be suffering with intussusception, one-third each of a pair of Seidlitz powders dissolved in an ounce and a half of water, introducing the carbonate solution first. Preventing the escape of the gas, the abdomen was vigorously kneaded. The child was fully anæsthetised. Recovery followed. The *Journal de Méd. et de Chir. Prat.* had previously reported a case of M. Guyon's. The patient, a man æt. 62 years, had an inguinal hernia which had been reduced after symptoms of incarceration had made their appearance. Some hours later vomiting set in, which soon became fæcal in character, and was accompanied by symptoms of collapse. An œsophageal catheter was introduced into the rectum to an extent of forty centimetres, and through this the contents of two siphons (the contents of the first in great part escaping) injected into the intestine. Colic of a marked character soon came on, which was followed by the evacuation of stinking fluid matter, and this in turn by hard fæcal masses; and after the expiration of two hours the patient was out of danger. Béhier in one and Bouchut in ten cases of intestinal obstruction from impacted masses of fæces, employed the same treatment with good success. All the cases recovered.

CHOICE CRITICISMS.—Sometimes we are told that the critical art is lost, and in medical literature there is seldom anything lively in it; though, alas! there are lamentable instances of personal spite or favouritism. Sometimes, however, we meet with odd scraps that are at the least peculiar. Here are a few we select from the month's produce:—

On Küss's Physiology one reviewer remarks that "the candidate who is well Kussed before examination will do less of it afterwards."

Dr. M. B. Wright, in a debate on puerperal fever at Cincinnati, said: "Perhaps with a show of propriety he might mention one man (Meadows) who had written a little book on obstetrics, which had acquired some reputation among those who think that any thing foreign must of necessity possess more value than home productions. He speaks of blood-letting as a remedy in the treatment of eclampsia as the 'old method.' It can not be that a man who talks as he talks, ever witnessed the effects of the lancet on eclampsia. No boy ever had the stamp of the dullard more strongly marked upon his face than has that book the marks of ignorance as to the treatment of eclampsia."

The *New York Medical Journal* for September, scores mercilessly the *New York Medical Register* for 1875-6 for a number of defects and shortcomings, chief among which are the following: It is confused in its arrangement; it has no index; the advertisements interspersed through the book give it the appearance of a cheap business directory, and the typography is wretched.

The *N. Y. Med. Record* was severe on "Steiner's Compendium of Children's Diseases," translated by Mr. Lawson Tait, but the *Chicago Med. Journ. and Exam.* comes to the rescue with the following:—

"The author of the critical (?) review to which we refer objects to the phrase 'exhibition of a drug,' and decides that 'administration' is the proper term to be employed in such a connection. If Dr. Noah Webster be considered an authority in such matters, Mr. Tait is quite correct in his use of the language. Here is the definition given in the Dictionary *verbatim*:

"'3. (Med.) To administer as a remedy; as, to *exhibit* calomel.'"

"Our critic further considers 'contraction' an imperfect translation, when 'contracture' should be employed. There is no such word as 'contracture' in proper English medical phraseology.

"The same writer would substitute for 'exaggerated respirations,' 'accelerated'—a substitution which would entirely change the meaning of the author.

"He would also change 'Canton Schweiz' and 'Schweiz' into 'Switzerland.' Now, 'Canton Schweiz' no more refers to 'Switzerland' than does 'Borriboola Gha!' We recommend our critic to the study of geography.

"Here is a sample of the mother tongue of the same reviewer: 'Children predisposed to scrofula entirely on animal food,' 'by no means so full as the American reader would like to see,' &c.

"This is hypercriticism, but it is the sole remedy for hypercritics."

We have purposely taken our specimens from distant sources, but we must give one from an English paper, for the sake of the concluding wish it so innocently expresses. The *Medical Press* has the following paragraph:—

Piracy.—We take this opportunity of thanking our contemporary, the *Medical Times*, for the compliment it occasionally pays us in copying our articles. Still, in common fairness and honesty, its conductors might now and then acknowledge the source from whence its information is derived. On referring to the *Medical Times* of the 2nd October we find an obituary of Dr. Geo. Ross copied *verbatim* from the *Medical Press* of the previous Wednesday, even to a slight error which crept into our original. We repeat our expressions of gratitude to our contemporary, but we would rather it had penned *its own obituary!*

OBITUARY.

ATKINS.—On the 22nd September, at Ottery St. Mary, Devonshire, Wm. Atkins, L.R.C.P.Ed., aged 58.

BENNETT.—On the 4th October, at Worksop, Edwin Bennett, M.R.C.S.E., aged 47.

BOWER.—On the 7th September, at Wilmslow, Cheshire, Joshua Bower, M.R.C.S.E., aged 44.

BUNCE.—On the 29th September, at Norwood, John Strudwicke Bunce, M.D., F.R.C.S., late of Woodford, Essex, aged 69.

CLARKE.—On the 5th September, at Trincomalee, William H. Clarke, M.R.C.S.E., Staff Surgeon, R.N., aged 52.

COOPER.—On the 17th September, at Woburn Place, George L. Cooper, F.R.C.S.E, aged 65.

DERBYSHIRE.—On the 20th September, at Stockport, Wm Derbyshire, M.R.C.S.E., aged 61.

DICKINSON.—On the 27th September, Joseph, the second son of the late W. F. Dickinson, M.R.C.S., of Fountain Street, Ulverston, aged 29 years.

DEMPSEY.—On the 14th September, at Charterhouse Square, Joseph M. Dempsey, M.D.

DUNLOP.—On the 6th October, at Greenock, Dewar Dunlop, L.F.P. & S. Glas., aged 55.

EVANS.—On the 22nd September, at Bristol, J. J. Evans, F.R.C.S.E., aged 67.

FORSYTH.—On the 6th October, at Templeard, Culmore, Geo. Crompton Forsyth, M.B., aged 22.

FURNIVALL.—On the 2nd October, at Egham, Edward T. Furnivall, M.R.C.S.E., aged 41.

HARRIS.—On the 28th September, at Manchester, Michael Harris, M.B., Assistant-Physician to the Children's Hospital, Pendlebury, near Manchester, aged 26.

HIRST.—On the 10th September, at Morley, Yorkshire, Lionel Hirst, M.R.C.S.E, aged 32.

LARDNER.—On the 21st September, at Gillingham, Kent, Jason Lardner, M.R.C.S.E., aged 70.

LEECH.—On the 22nd September, at West Street, Chichester, Edward Leech, M.R.C.S., aged 75.

M'DONNELL.—On the 17th September, at Drimnakeel, Ballycastle, Dr. M'Donnell, late of Cushendall, aged 77.

MANFORD.—On the 5th October, at Ness Bank, Inverness, Robert A. Manford, M.D., aged 66.

MATTHEWS.—On the 7th October, at Maida Vale, Robert Hughes Matthews, M.R.C.S.E., aged 70.

RICHARDSON.—On the 18th September, at Oatlands, Mortimer Road, Kilburn, Wm. Richardson, M.D., aged 64.

SMITH.—On the 12th September, J. T. Smith, M.R. .S.E., of Sutton Coldfield, Warwickshire, aged 39.

WALKER.—On the 28th September, Joseph Walker, M.R.C.S.E., of Burslem, aged 69.

NOTICES.

THE DOCTOR is published Monthly, price Sixpence, and sold by all booksellers. It is also supplied by the Publishers named at the foot of the last page.

Subscribers paying in advance receive THE DOCTOR post free at the published price. Subscriptions may begin at any time, but must end in December. This is necessary on account of the multitude of small accounts.

Post-office orders or cheques to be made payable to Baillière, Tindall, and Cox, 20 King William street, Strand, London, W.C. Where it is difficult to obtain a Post-office order, postage stamps (HALF-PENNY ones preferred) may be sent. No form of subscription is necessary; an ordinary visiting card or name and address on paper, enclosed with the amount of subscription, will secure the regular transmission of THE DOCTOR as soon as published. The Subscription for the year is 6s., post Free in the United Kingdom.

In America, France, Belgium, Algiers, Australia, and wherever the postage is one penny the subscription is 7s.; India, Spain, Germany, and where the postage is twopence the subscription is 8s.; Italy, and where the postage is threepence, 9s.

THE DOCTOR.

LONDON, DECEMBER 1, 1875.

Multum in parvo.

TO OUR READERS.

THE close of our fifth volume affords a favourable opportunity for a few words to our readers, especially to those who do not receive THE DOCTOR every month. There is no necessity to remind regular readers of the leading features of our publication. They know that during the past five years we have endeavoured to place before them a faithful record of the progress of medical literature and practice.

A glance over the index, which occupies so considerable a space of the present number, shows that the motto—*multum in parvo*—truthfully expresses the great variety of the contents of THE DOCTOR. If our record of medical progress be not complete, that is because such a result is unattainable, so extensive is the scope of our art, so rapid the accumulation of our literature. We trust, however, that all the most practical points have been noticed, so that our readers have been kept informed of all that it most concerns them to know; and we fearlessly assert that nowhere else is such a digest of medical practice and literature to be obtained at so small a cost.

The position of THE DOCTOR is now assured. Notwithstanding every species of opposition, it has held the even tenor of its way for five eventful years, during which no medical periodical has been more frequently quoted in Europe and America as a leading organ of medical opinion. Are we, then, content? By no means; our desire is to make THE DOCTOR more worthy of its high position, and we hope to introduce several improvements in the coming year; but to enable us to accomplish all our desire we need the co-operation of our subscribers, and it is their interest as well as ours to extend our circulation, for, as we have before stated, we are content to expend its proceeds on its improvement. If every subscriber on our list would, before the 1st of January, not only forward his own subscription for the coming year, but induce a medical friend or two to do the same, we should be able at once to carry out several improvements. For the trifling sum of 6s. paid in advance our publisher will forward a copy of THE DOCTOR as soon as published for twelve months. Surely so small a sum ought to ensure the perusal of our pages by every member of the profession. No one can plead poverty as an excuse for ignorance of the progress of our art when for so small an amount he may receive month by month, an accurate chronicle of all that it most concerns him to know.

CHRONICLE.

TREATMENT OF HYSTERIA BY CHLORIDE OF GOLD AND SODIUM.

DR. MARTINI, in the *Pabellon Medico*, extols this drug in the hysteria symptomatic of functional changes in the uterus and its appendages. He says that it is indicated in congestions and obstructions of the neck or of the body of the uterus. In five cases of congenital atrophy of the neck of the uterus, causing sterility, the use of chloride of gold and sodium produced excellent effects; the neck of the uterus acquired size as well as consistence; and in three cases the treatment was followed by pregnancy.

EUCALYPTUS GLOBULUS IN THE TREATMENT OF RHEUMATISM.

M. MAURICE (*Le Courier Médical*), physician to the Civil Hospital of Algiers, extols in very forcible language the therapeutic value of the leaves of the *Eucalyptus globulus* in the treatment of rheumatism.

He recommends it to be used in the following way:—A kilogramme of the fresh or half a kilogramme of the dried leaves to be left to infuse in boiling-water in the evening. On the following day this infusion is to be emptied into a bath, as hot as can be borne, in which the patient is to remain from ten minutes to a quarter of an hour. The effect of this bath is to produce most profuse perspiration.

VAGINISMUS.

PROFESSOR TRELAT, in the course of a communication to the Association Française pour l'Avancement des Sciences, pointed out the frequent dependence of this affection on superficial ulceration of the os and cervix uteri, and recommended attention to the various causes, and the use of judicious medication in its treatment, instead of Marion Sims' perineal section. Professor Trélat regards vaginismus as a *continued* contraction of the vulva and vagina, but without the characteristic intermittency of spasms and muscular contractions properly called.

THE ASPIRATOR IN SYNOVITIS.

Dr. Geo. W. Gay, in a report of some surgical cases at the Boston City Hospital, published in the *Med. and Surg. Journ.*, tells us that aspiration of the knee has been performed a considerable number of times in this hospital —enough to show that it is often beneficial, and very seldom, if ever, injurious. The time required for a sufficient recovery in three cases reported by Dr. G., to allow the patients to resume their occupation, was seventeen, thirty-seven, and fifty-four days respectively. The second case was well fifteen days after the single tapping—an unusually quick recovery. Twelve days after the single aspiration the third patient walked down three flights of stairs and up again without any pain or difficulty. Such results rarely follow the usual modes of treating these acute joint affections. Six or eight weeks are often required to get a patient with acute synovitis upon his feet, and even then a small amount of fluid or enlargement of the joint is apt to remain.

It seems reasonable to suppose that when the process of effusion has nearly or quite subsided, and absorption is slow in its progress, removing the fluid from the joint with a small, hollow needle hastens the recovery. That merely puncturing a joint stops the secretion of the synovial membrane is by no means proved; and moreover, relapses are probably as frequent in cases treated by aspiration as in any others. Yet the operation is a valuable addition to our methods of treating effusions of fluid into the knee-joint. Dr. G. adds: "It is safe. It hastens recovery in many cases. It may be used in acute as well as in chronic cases, whatever may be the character of the fluid in the joint. And it may be repeated as often as necessary."

EFFECTS OF DIVISION OF THE OPTIC NERVE.

Dr. V. Krenchel (*Onderzoekingen gedaan in het Physiol. Lab. der Utrechtsche Hoogeschool, Derde Reeks*, iii. i., and *N. Y. Med. Record*) has repeated Dr. Berlin's experiments of dividing the optic nerve of the frog, and obtains results quite contrary to those of that observer. It will be remembered that the latter found that this operation produced a direct accumulation of blood in the retinal vessels; the retina assumed a whitish cloudiness, and often became separated from its attachments; sometimes there were marked inflammatory changes of all the retinal layers, and, finally, granular degeneration of the optic nerve fibres. Occasionally the whole eye was destroyed by inflammatory action.

Krenchel also observed these change when the operation was performed by Berlin's method; but he shows that this is due to the section of the vessels in the nerve and the ciliary vessels, which is unavoidable by that method. He found that he could divide the nerve within the skull, and thus avoid wounding the vessels. He incises and shoves back the mucous membrane of the pharynx, so that the optic chiasm can be seen through the thin bones, a little posterior to the equator of the eye, and divided with a small pair of sharp scissors. He found that in frogs thus operated on, for six months after the operation there was no change in the eye, either by ophthalmoscopic or microscopic examination. With polarised light the fundus was likewise found to be normal. The fundus was always dark whenever the two nicols had the position in which the reflex of the corneal tissue disappeared; only the red veins of the hyaloid could be seen over the black ground, due probably to the fact that all the light coming out of the eye is reflected by the retina. The white streak of the retinal vessels then disappears, which proves that the light comes directly from the smooth upper surface of the retinal vessels, or from the blood column, as indicated by Prof. Donders, and not from reflection from the fundus oculi and refraction by the vessel, as asserted by Loring. In the latter case it should, just as in the remaining parts of the fundus, be depolarised, and can, therefore, not disappear by turning the nicols. K. found that the circulation of the blood in the vessels of the hyaloid remained unchanged, and that the retina and pigment layer retained their normal appearance. The fibres of the optic nerve were always found to be normal. In a few cases, however, there was a fatty degeneration of the nerve filaments, though only one to two millimetres from the point of section. Most of the animals were kept alive five to six months, but it is very probable that the nerve layer of the retina would degenerate after a longer period. Lehmann says that fourteen days after the destruction of the nerve within the cranium, the nerve layer has already disappeared; but it is not possible to recognise delicate changes in the frog's eye by his method of examination.

Berlin states that the pupil contracts in his method of operating, and remains contracted for several days; it then dilates and remains dilated. Krenchel found that the pupil, even after several months, retained a certain mobility to light, although it does not contract nearly so long or so rapidly as before. This agrees with the fact known since the investigations of Brown-Séquard, that even in extirpated frog's eyes the iris reacts to light, although more weakly than in intact animals. By this method of dividing the nerve without injury to the nutrition of the eye the pupil does not contract, and what is more remarkable, the mobility on the penetration of light is not diminished. Even in animals which had been operated on five to six months previously, accurate and often repeated comparison with normal frogs revealed no difference either in the size of the pupil or in the reaction to sun, day, or gas light.

GELSEMINUM IN TOOTHACHE AND NEURALGIA.

Dr. S. Thomson, of Ashton, Torquay, in a paper on the "Rapid Cure of Neuralgic Pain," in the *Lancet*, expresses great confidence in gelseminum, but says it is often given in too small doses. He almost invariably prescribes for an adult, twenty minims of the tincture as a first dose, to be repeated any time after an hour and a half if relief is not given. Rarely has he to order a third dose, and has never found any inconvenience result from the larger doses. In one instance, a gentleman who, unadvisedly, took thirty minims at once, and immediately afterwards went out driving, experienced for an hour or two some uncertainty of vision when guiding his horse. A severe attack of neuralgia of the jaw was, however, cured by the one dose, and did not return. One young lady, after two twenty-minim doses during the night for a severe neuralgic attack, more particularly of the temporo-auricular branch of the inferior maxillary nerve, complained of a little heaviness next morning. In this case little if any relief was given; but the teeth and alveoli were not implicated, and it is only when these are that complete relief can be calculated on according to Dr. T.'s experience. He further mentions the case of a lady who suffered severely from neuralgia, attacking at one time the lower jaw and at another the orbital and frontal nerves. The gelseminum invariably relieved the maxillary pain, but had no effect whatever over the frontal.

GELSEMINUM IN NEURALGIA.

Dr. Jurasz, of Heidelberg, reports five cases in which he gave tincture of gelseminum sempervirens, in five-drop doses three times a day, for severe neuralgia. They all recovered in a few days. Recovery was quickened by the use of the constant electric current and warm baths. Dr. Jurasz has also given gelseminum without result in a case of hemicrania of long duration, and in two cases of muscular rheumatism. He has not been able to observe any special effect to be produced on the organism by the gelseminum.

GASTRO-PULMONARY FISTULA PROCEEDING FROM AN ULCER OF THE STOMACH.

In a case which Inlinsberger has published in the *Berlin. Klin. Wochenschrift*, No. 51, the patient expectorated during life muco-purulent matter containing particles of food; after each expectoration the swelling of the stomach subsided.

The communication between the stomach and the lungs was thus produced:—The pyloric portion of the stomach adhered to the liver at the level of the suspensory ligament; on the posterior wall of the pylorus existed a large perforation, opening above into a cavity of the size of the fist, full of air and putrid matter. The walls of this cavity were formed above and on the right by the thoracic walls, below by the liver, on the left by the stomach, behind and above by the diaphragm. This muscle was adherent to the pleura and lung, and presented an opening similar to that which existed on the stomach. The bronchi opened into this cavity, making a communication with the trachea. Several tumours were found in the stomach, of which some were ulcerated.

ABSENCE, ALMOST COMPLETE, OF THE CLAVICLES.

O. Kappeler (*Centralblatt f. Chirurgie*, No. 22) has seen a girl sixteen years of age, of small figure, but otherwise well developed, in whom both clavicles were almost completely absent. On the right of the sternum there was a rudimentary bone of one centimetre and a half long (about three-fifths of an inch), and on the left a bone of four centimetres (about one inch and three-fifths). This girl could approximate her shoulders till the heads of the humerus were separated by an interval of only nine centimetres (about three and a half inches). The sterno-cleido-mastoid was absent on one side, nevertheless there was no functional trouble, and, for instance, she could raise herself perfectly on her two hands.

ANEURISMAL TUMOUR OF THE PHARYNX.

Mr. John J. Barnes, of Bolton, relates in the *Lancet* the following interesting case:—

B. N———, aged seventy-three, a female patient of mine, had complained of slight difficulty in swallowing. On looking into the throat I found it natural, with the exception of a small pulsating tumour, situated at the back of the pharynx, between the median line and the right posterior pillar of the fauces, but nearer the latter. It is about an inch in length and half an inch in width, the upper end being opposite the lower edge of the soft palate. The pulsation of this tumour is entirely arrested by very moderate pressure over the external carotid. Partly, no doubt, from the difficulty of getting a good *point d'appui*, it cannot be arrested completely by such pressure as my patient can bear over the common carotid.

Cases have been recorded by Porter and Syme of aneurism of the internal carotid "pointing" in the above situation. I think, however, from the extreme ease with which the pulsation is arrested in this case by pressure over the external carotid, that it is more likely to be an aneurism of the ascending pharyngeal branch of that artery. It is of course open to anybody to maintain that the pressure with which one arrests the pulsation is conveyed through intervening structures to the internal carotid. I can only reply that the pressure required is so moderate that it seems doubtful whether it would be sufficient to stop the flow through the internal carotid, considering its depth from the surface. There are no pressure signs; the pupils are equal; there is no alteration of voice; no dyspnœa. The only complaint is of occasional slight discomfort in swallowing, which amounts to very little. There is no evidence of aneurism elsewhere.

Considering the age of my patient, and that the tumour has not materially increased during the last three months, I do not feel justified at present in tying the common carotid. If the aneurism should increase, I think it would be right to give digital pressure a trial. In the event of any bleeding coming on, the patient's friends have been instructed how to compress the external carotid, which they can do perfectly. Tying the common carotid would then, I presume, be the only resource.

IRON IN THE SPLEEN.

Dr. Nasse (*Centralblatt f. d. Wissenschaften*), in his examinations of spleens, found yellow granules consisting entirely of the oxide of iron. These were the largest and most abundant in old horses. If a piece of the splenic pulp be treated with dilute muriatic acid and ferro-cyanide of potassium these granules will be tinged a deep blue. The amount of iron in the dried pulp amounts in this animal to almost five per cent. The granules are less numerous in young horses; we find all the variations from immeasurably fine granules to the largest, the amounts of iron corresponding to the sizes. The small grains are probably the result of the destruction of blood-globules. Next to that of the horse, comes the spleen of the ox as regards the amount of iron contained; in dogs and rats there are but few yellow granules, but here and there a diffuse yellow colouring.

DYSPHAGIA CAUSED BY LORDOSIS CERVICIS.

A case is reported by Dr. Sommerbrodt (*Berlin klin. Wochenschrift*) of a man, aged 68, who had observed a slight difficulty in swallowing for about a year. It had gradually increased until finally only fluid food could be taken. On laryngoscopic examination he found a regular, hard, protuberance, which partially covered the posterior portion of the larynx; it began about the upper plane of the tongue and projected forward and gradually curved downward, extending over the entire breadth of the pharynx. This lordosis of the cervical spine seemed compensatory for a kyphosis of the dorsal portion which was found to exist. Dr. S. states that lordosis seldom causes any difficulty of swallowing, because it rarely happens in exactly this position, and even when it does, there is usually at the same time a considerable lateral curvature.

NEW METHOD OF PRESERVING PATHOLOGICAL SPECIMENS.

Dr. Jos. G. Richardson gives the following directions:—Place a small fragment of any tumour or pathological structure, say a quarter to half an inch square and one-tenth of an inch thick, in a couple of drachms of saturated solution of acetate of potash, and allow it to fully imbibe the fluid by soaking therein for forty-eight hours. The solution referred to is best made by simply pouring half an ounce of rain-water upon one ounce of dry granular acetate of potash, in a clean bottle. When the tissue is thus fully saturated with this saline liquid, remove it by means of a pair of forceps, without much pressure, and insert it in a short piece of india-rubber tubing, or wrap it up carefully in a number of folds of thin sheet rubber or of oiled silk, tying the whole firmly at the ends with strong thread. When thus prepared, specimens can be enclosed with a letter in an ordinary envelope, and sent long distances, doubtless thousands of miles, by mail without danger on the one hand of decomposition, because of the preservative power of the potassic acetate, or, on the other, of desiccation, on account of its exceedingly deliquescent nature.

One very important advantage which this plan has over those in which alcohol or glycerine is employed as a preservative agent, is that the menstruum has little or no effect upon the oil-globules contained in cells. Hence by its aid we are enabled to recognise fatty degeneration in the cellular elements of a tumour, and easily to detect the same metamorphosis in the kidneys from minute oil drops in the epithelium attached to the tube casts of Bright's disease, under circumstances where specimens preserved in glycerine or alcohol would afford a doubtful or wholly negative result.

Urinary deposits composed of oxalate of lime or triple phosphates are not, according to my experience, readily preserved in solution of acetate of potash, possibly on account of chemical decomposition which occurs. When these crystalline bodies are met with, as is usually the case, in non-albuminous urine, they could probably be best retained in an unaltered state by adding from twenty to thirty per cent. of solution of carbolic acid to the renal secretion in which they are found.

BACTERIA AND PUTREFACTION.

Dr. Arnold Hiller, of Berlin, from a series of experiments made with the view of determining the relations of bacteria to putrefactive changes, has come to the conclusion that the whole subject requires to be re-examined from the beginning. He says that active putrefaction may take place in the absence of bacteria, and that these organisms may be present in abundance without giving rise to putrefaction. Is it not possible that effect may have been mistaken for cause?

THE CIRCULATION IN PREGNANCY.

Dr. Barnes has read to the Metropolitan Association some remarks on some physiologico-pathological phenomena of the circulation in pregnant women. Here are his general conclusions.

1. There exists in pregnancy a peculiar state of the blood, an increased arterial tension, and a disposition to phlebectasis, general or affecting particular vascular regions or systems, which may, under certain circumstances, lead to hæmorrhagic effusions.

2. These hæmorrhagic effusions may be salutary or conservative. Hæmorrhages from the mucous membranes, by relieving excess of tension, may avert internal hæmorrhages or abortions, or that oppression of the kidneys which results in albuminuria and eclampsia.

3. Hæmorrhages from the uterus inducing abortion may, in the same way, avert more serious mischief, especially albuminuria and eclampsia.

4. But these hæmorrhages, although we may recognise in them a conservative purpose, easily exceed physiological or useful limits, and may themselves induce danger by anæmia.

5. Hæmorrhages, from whatever part, occurring in women within the period of sexual life, should suggest the probability of pregnancy, or of menstrual disorder.

6. The hæmorrhages described should be taken as indications to reduce vascular tension. This may be done in some cases by bleeding, general or topical ; by purgatives; by salines ; by abstinence from stimulants ; by regulation of diet ; by digitalis, hydrocyanic acid, and other means.

7. Bleeding from the arm may avert abortion, not only by reducing arterial tension, but also by a derivative action determining the direction of the blood from the pelvis to the opening in the vein. This derivative action of bleeding was much relied upon in a variety of cases by Lisfranc.

8. In some cases, where the hæmorrhages are frequent and great, and induce serious symptoms, the induction of labour is indicated.

A SIMPLE PLUG IN NASAL HÆMORRHAGE.

Dr. T. H. Jewett says in the the *Medical and Surgical Reporter* that many years since the venerable and eminent surgeon, Dr. W. Perry, of Exeter, N. H., taught him, at the bedside of a patient nearly moribund, the following simple method of arresting nasal hæmorrhage, which he has never known to fail :—

Roll up between the thumb and fingers a lock of cotton into a cylinder or little roll, an inch or inch and a half in length ; tie a strong thread to the middle of the roll ; bring the two ends of the roll together, and then, opening the nasal orifice by pressing down with the point of the finger its lower margin, pass the middle or folded part of the roll (where the string is tied) into the nostril; next, with the blunt end of a lead pencil or stick, press in the cotton roll slowly, along the floor of the nostril, an inch or more, and rest. If the blood passes down into the throat, you may be sure the bleeding spot is behind the roll, so push in your roll further and the blood will cease to pass behind. Then holding on to the string pass some loose cotton into the nostril, and push it in and along, with the pencil, down to the plug. The cotton will swell with the moisture, compress the bleeding surface, and arrest the hæmorrhage. It is well to let the plug remain for two or three days. The string attached to the cotton may be carried up around the alæ nasi to the side of the cheek, and fastened with a strip of adhesive plaster. In a day or two the mucus or natural secretions of the nasal surfaces will loosen the plug, and it may be easily removed by the string. The dry cotton will, in all ordinary cases, answer for the plug. If you choose, you can wet it in liquor ferri persulphat., or cause the plug to be dusted over with pulv. ferri persulphat., or ferric alum, or tannic acid, or any other astringent that may be preferred.

Here we may add that J. English, in the *Centralblatt f. Chir.*, No. 34, recommends a rubber bag attached to a flexible rubber tube, introduced through the nostril into the naso-pharyngeal cavity, the rubber tampon is filled with water and then drawn up tightly into the posterior nares. A clamp attached to the rubber tube prevents the escape of the water.

ANOTHER SIMPLE TREATMENT OF DIABETES.

The motto, "Shut your mouth and save your life," has received a new application, for Dr. Charteris, of the Glasgow Royal Infirmary, has communicated to the *Lancet* (Nov. 6) two cases benefited by a simple treatment he learned from a confirmed diabetic, who discovered it after this wise. He found that he commenced to wheeze when he breathed the cold air, and that it ceased on his return to a warm room. On putting his head below the bedclothes a slight perspiration came upon him, the saliva returned, and his tongue and mouth became moist, instead of dry, as formerly. When he withdrew his head again, and breathed in the open, his mouth and tongue again became dry and parched. This moistness and dryness of the mouth alternately occurring under the conditions mentioned having arrested his attention, the question arose in his mind, how could this moisture be obtained without remaining in bed ? To accomplish this he put on a respirator, and also a knitted woollen cloth over both the respirator and his nostrils when in the house, or even in bed, and was careful in protecting the nostrils as well when he went out. He also began to practise breathing by the nostrils alone, and found that breathing exclusively in this manner day and night, except when engaged in conversation, was highly beneficial. Having perfected himself in respiring by the nostrils alone, he laid aside both the respirator and the cloth, only muffling himself carefully up when he went out at night or in frosty weather. He avoided going out at night as much as possible, and refrained from all cold diet or drink, invariably taking them warm. Under this treatment an amendment was apparent in less than fourteen days, and in less than a month it was very marked. This patient now lives like any other temperate man, and, being a very intelligent person, has formed his theory in regard to the treatment. Briefly expressed in his own words, it is this :—"Hitherto the attempt has been made to prevent production of sugar by giving a non-saccharine diet. This is no doubt perfectly correct, but in addition to this the treatment I adopted was intended to promote the consumption of sugar produced. This design of consuming sugar by breathing through the nostrils in warm weather or by means of a respirator, is that when the proper quantity of sugar has been consumed, the abnormal production will then cease. The aim of this treatment is to raise the blood-heat to its proper temperature, and to restore to the lungs their partially lost combustive power, and so enable them to consume as much secreted sugar as will maintain the blood at its proper temperature. When that purpose is accomplished the organs will regain their proper function, and the patient recover."

As previously observed, Dr. Charteris has treated by this simple method two cases of diabetes in his wards in the Royal Infirmary, and both have been benefited.

FRACTURE OF NECK OF FEMUR.

Mr. Edmund Owen, having related a case of this accident, makes (*Brit. Med. Jour.*) the following remarks :—In an aged person, the neck of the femur will more likely give way on the inside of the capsular ligament than on the outside, and from a slight injury, such as a trip or stumble. But, as is well known to be the case, a heavy fall, or a severe blow upon the outside of the great trochanter, will give rise to a fracture outside the capsule. By the light of short comparative tables, such as may be found in most works on this subject, a diagnosis as to the exact position of the line of fracture as regards the capsular ligament should, at any rate on paper, be simple and sure enough. But in some, I might say in many, cases, the diagnosis must be uncertain. Following the advice of Sir Astley Cooper, many surgeons will not attempt to keep in confinement a patient in whose case they have diagnosed intracapsular fracture ; whilst, should the seat of fracture be supposed to exist outside the capsule, the patient would have to submit to the treatment by the long splint. What becomes of the cases where the diagnosis is uncertain ? I am of opinion that all cases of fracture of the neck of the femur should be treated as if the surgeon anticipated a bony union. If the patient cannot bear the confinement in bed, nor the weariness of the extension of the limb, then, whatever be the seat of the fracture, he must be liberated, at any rate for a time. This plan of treatment will in any case give the patient the best chance of a good result as regards union. Suppose the fracture to have been within the capsule, no harm can have been done with due care. On the other hand, supposing that an extracapsular fracture be diagnosed as intracapsular, and no apparatus applied, the patient will have a comparatively useless limb all his days, and we have done him an irretrievable wrong.

BORACIC ACID IN RINGWORM.

Surgeon-Major Watson reports in the *Indian Medical Gazette* that he has lately employed boracic acid with very great success as an external application in the treatment of the vegetable parasitic diseases of the skin. An aqueous solution of boracic acid of a drachm to the ounce, or as much as the water will take up at ordinary temperatures, is employed. The affected parts should be well bathed with the solution twice daily, some little friction being used, and it should not be wiped off, but allowed to dry on the part. The remedy is said to be simple, cheap, and efficacious.

THE TREATMENT OF VOMITING OF PREGNANCY.

Dr. Thomas Fairbank, of Windsor, recommends (*B. M. J*) dilute phosphoric acid in doses of from thirty to sixty minims in a wine-glass of water two, three, or four times a day, as may be required. It is of special value in cases where the nausea becomes extreme at the sight of food, as a dose may be easily taken before meals. Amongst all the remedies for this particular discomfort, he has found none so uniformly efficacious. It may act by powerfully stimulating the nerves of the stomach, or as a corrective (if, as is asserted, the vomitings of pregnancy are alkaline), or in both ways. It is pleasant to the taste.

TREATMENT OF OSTEO-NEURALGIA BY TREPHINING.

Professor Gosselin, in an article in *Le Courrier Médical*, introduces to the pathology of bone a new form of osteitis of the long bones, which he styles *l'ostéite à forme névralgique*, and which he states to be characterised by two principal symptoms—a progressive swelling, and a violent intractable continued pain, but with exacerbations, resisting for a long time all therapeutic means, and which, in spite of the absence of fever and suppuration, causes sleeplessness, nervousness, and depression. These symptoms he attributes to condensation of the osseous tissue, and inflammation, by proximity or compression of the nervous filaments, which have been demonstrated by Gros, Kobelt, and Kölliker to exist in the osseous canals.

For the treatment of this affection he recommends the use of the trephine and gouge, and relates cases in proof of the success of this treatment

The same paper contains the observations of Dr. Pingaud, addressed to the Academy of Sciences, which prove that the flat bones may also be the seat of this condensing osteitis, of a neuralgic form, and that trephining applied to them is equally efficacious.

His patient, aged 24 years, was under observation for 18 months for periostitis of the right frontal region, which suppurated, leaving a fistulous opening leading to a piece of denuded bone, hard and resisting. No appreciable cause, other than the weight of his helmet, could be assigned for this. He was subject to most intense neuralgic pains in all the region supplied by the fifth nerve of the right side, and subsequently to epileptiform attacks, which led to the belief that there was suppuration between the dura mater and skull. Dr. Pingaud applied the trephine, but to his great surprise he failed to find any collection in or under the bone, but, on the contrary, found a very hard and thick bone, of which the diploe was entirely condensed, so thick that the greatest part of the crown of the trephine had disappeared before it had traversed the whole thickness. After the operation the neuralgic pains entirely ceased, and also the epileptiform attacks.

SEDATIVE PROPERTIES OF ELECTRICITY.

Dr. Poggioli advocates very warmly, in the *Tribune Médicale*, the use of electricity as an energetic sedative agent, not only in nervous affections, but even in acute inflammations, and in support of its efficacy in the latter class of cases relates one of inflammation of the globe of the eye which resisted antiphlogistic and emollient treatment, and rapidly yielded to the use of electricity. He also relates cases in proof of its sedative effects in many other affections. Dr. P. considers that electricity should be applied as often for its sedative as for its stimulant effects.

URÆMIA, THE RESULT OF COMPRESSION OF THE MOUTHS OF THE URETERS BY A VESICAL CALCULUS.

The following case is recorded (*Le Progrès Medical*) in the proceedings of the Société Anatomique :—A woman, 68 years of age, was brought to the Hôpital Saint-Antoine in a state of profound coma, and placed under the [illegible]

M. Molland. She had been found in that state in a room where she lived by herself, and those who carried her to the hospital could not furnish any information of value respecting her. She died shortly after admission. On post-mortem examination the bladder was found to be empty, strongly contracted, and to contain a calculus the size of a small hen's egg, firmly embedded in the vesical trigone, and exactly compressing the mouths of the ureters. These latter were dilated to the size of the thumb—the left slightly more so than the right. The dilatation of the left ureter extended to the pelvis of the corresponding kidney, and formed there a large fluctuating tumour full of urine and pus. The left kidney was almost completely disintegrated. The pelvis of the right kidney was dilated to the size of a large egg, and the kidney itself manifestly hypertrophied. All the other organs were found to be intact.

MEDICAL FEES IN ENGLAND.

On this subject *La France Médicale* makes the following remarks:—Medical fees, for the generality of practitioners, are not so high in France as in England, but there are in the latter country, which is one of extreme wealth and extreme poverty, some examples of cheapness (*bon marché*) that one no longer meets with with us, since the time of that old practitioner, well known by the medical generation of 1830, who asked, a visit, either 50 centimes or a common object, such as a little broom, a hammer, a saucepan, which he would carry in the pouch of his great coat. Mr. Palmer, in withdrawing from some societies to which he belonged, stated that the price of his consultations for the working classes will be threepence, consultations and medicine included, and the price of his visits to their houses, sixpence.

THE INTEGRITY OF THE MEMBRANES IN NON-SPONTANEOUS ABORTIONS.

Dr. Leblond (*Annales de Gynécologie*) seeks to demonstrate by a series of observations that in spontaneous abortions of the first three months of pregnancy the embryo is expelled enveloped with its membranes intact. He draws the following conclusions from his observations:—

1. When abortion takes place *en bloc*, it is probable that it is spontaneous, at least that it has been provoked by means which only cause the expulsion of the ovum without affecting its membranes.

2. When the membranes are ruptured, and at the same time healthy, it may be concluded that, very probably, the abortion has been provoked.

3. The medical jurist cannot draw any conclusion from the expelled body when the membranes present pathological alterations, so that the product of conception being dead in the uterus a certain time, it would be almost impossible to recognise in it traces of the violence that it would have been subjected to. In these cases the product resembles a clot of blood, which passes unperceived along with those which accompany it. The membranes are infiltrated with blood, and differ but little from the surrounding parts; they are slightly resisting, and tear easily. Some loose shreds are usually observed on their surface, which are *débris* from the uterine mucus membrane.

A CASE OF BLACK DISCOLOURATION OF THE TONGUE.

L'Union Médicale publishes the following case, which was brought before the Société Médicale des Hôpitaux, by Dr. Féréol.

The subject, a previously healthy man, aged 40 years, suffered from pultaceous inflammation of the tonsils, accompanied with considerable fever and malaise, which lasted longer than is usual in such cases. During convalescence a black discolouration appeared on the posterior part of the tongue, in front of the lingual V, itself forming another V, without extending to the sides of the organ, and constituting a patch more or less thick. After a month's treatment with nitrate of silver and bichloride of mercury there still remained a slight trace of it.

On examination under the microscope the lesion presented epithelial layers imbricated one on the other, and analogous in many respects to the structure of the hair. The black colour was due to a general tint which imbued it, as no pigmentary deposits could be discovered in the cells.

Dr. Féréol considers that this lesion deserves the name of piliform epithelial hypertrophy, and that the presence of the microphyte seen by M. Raynaud in one of the cases examined by him was merely accidental.

THE MOVEMENTS OF THE IRIS.

M. Debouzy, regarding the generally accepted explanation of the movements of the iris as erroneous, puts forward, in a thesis styled "Considérations sur les Mouvements de l'Iris," a new theory, based on experiments and observations, which seems worthy of further consideration. According to his views, the radiating and circular fibres of the iris form but a single muscle, a muscular diaphragm, animated by a single nerve, the motor oculi; there being no antagonism between the radiating and circular fibres, or the motor oculi and sympathetic nerves. All the muscular fibres, radiating and circular, become active at the same time, and their simultaneous contraction produces narrowing of the pupil; whilst dilatation is the result of the elasticity of the membrane.

The sympathetic nerve has no power as a muscle-dilator, but it has the power of producing contraction and dilatation of the pupil through its vaso-motor influence, contraction being the result of dilatation of the vessels of the iris and turgescence of the membrane, and dilatation the result of vascular constriction. Light has no influence on the nerve, for after division of the third pair, the diameter of the pupil remains unaltered in light or obscurity; but the sympathetic is sensible of excitations of peripheral nerves, and, pinching the sciatic, for instance, produces contraction of the pupil, a fact inconsistent with its being a muscle dilator.

TRANSFORMATION OF BLOOD INTO SOLUBLE POWDER: ITS CHEMICAL, PHYSICAL, AND ALIMENTARY PROPERTIES.

M. G. Le Bon exhibited at the meeting of the Académie des Sciences of the 27th of September last a specimen of blood in powder, prepared 18 months, which was soluble in water, and an acidified solution of pepsine, having the properties of defibrinated blood, precipitating by heat, and giving in the spectroscope the two bands of absorption of hæmoglobine. In this respect it differed from preparations found in commerce under the name of "extract of blood," which, though more soluble than blood in ordinary powder, want the hæmoglobine, which forms 86 per cent. of the globules. Blood, when reduced to powder by evaporation is nearly insoluble in water, and extremely indigestible. M. Le Bon considers (*L'Abeille Médicale*) his powder mixed with some leguminous meal would form a most nutritious and portable aliment for the use of armies during war, and from it richness in iron and its tonic properties would be useful in therapeutics.

PHOSPHORUS NECROSIS: ITS PATHOGENY AND PROPHYLAXIS.

M. E. Magitot, in a communication to the meeting of the Académie des Sciences of the 26th of October last, points out as the exact condition necessary for the occurrence of this disease in match-makers and other workers in phosphorus, the existence in them of a certain variety of dental caries, *penetrating caries*, which he states is the invariable and exclusive means of entry of the poison. "Dental caries presents three stages: 1, superficial caries, of the enamel; 2, moderate caries, of the ivory; 3, deep or central caries, with denudation of the pulp. None of the three forms thus defined can be the cause of the necrosis. It is to a variety of the third stage that we attribute exclusively such an influence. In this relatively rare variety the pulp is destroyed, as well as its radical prolongations; the organ completely empty is become a kind of sac, serving as a receptacle for a collection of matter, alimentary detritus, mucus, &c. It is this collection which is the refuge and vehicle of the phosphorised agents, which thus make their way to the periosteum, where they provoke *alveolo-dental periostitis*, the constant initial accident of the necrosis. Then this periostitis, maintained by the incessant addition of other phosphorised materials, propagates itself, and osteitis followed by necrosis takes place. This special caries we designate *penetrating caries*."

M. Magitot lays down (*La France Médicale*) the following rules as prophylactic:—

1. The heads of workshops will be held responsible, under control of the authorities, to make workmen undergo an examination of their mouths when they join the trade. Every individual affected with penetrating caries will be rejected or put back till cure and stuffing of the caries or extraction of the tooth is followed by complete cicatrisation.
2. All those who only present signs of inflammation of the gums or caries of the first stages may be admitted to the workshop with impunity.
3. A half-yearly personal inspection of the workshops will discover the workmen who, since their entry, have become affected with penetrating caries.

TREATMENT OF FISSURE OF THE ANUS BY CHLORAL.

Dr. Créquy extols, in the *Bulletin de Thérapeutique*, this treatment, and in proof of its efficacy, narrates two cases cured by it in less than three weeks. The disease presented itself in both patients nearly under the same conditions: one was 38 years of age, the other 41 years. The fissure occupied in both the posterior part of the anus, and was about a centimetre long, and from three to four millimetres wide; defæcation was extremely painful, and examination so much so as to cause them to cry out.

Dr. Créquy thus describes the manner in which he carried out his treatment: He directed the patients to go to the water-closet every morning, and if necessary use a clyster, and at mid-day he introduced between the lips of the fissure a little piece of charpie soaked with a solution of chloral, which remained there till the following day, when it was ejected during the act of defæcation. The first and second dressings were extremely painful, the third less so, and so on the pain diminished. In spite of the suffering caused by the dressing of the fissure, Dr. Créquy considers that most patients would prefer this treatment to either that by incision or forcible dilatations, which, in addition to the extreme pain caused at the time of operation, necessitates the patient keeping his bed for a long time. He considers the use of chloroform in forcible dilatation objectionable, as it relaxes the sphincter, and the surgeon has not the sensation of tearing which directs so well the extent of the dilatation when the patient is not chloroformed. To this cause he attributes many of the cases of reputed relapses.

THE ANATOMICAL CHANGES IN CHOREA.

In connection with the debate at the Medico-Chirurgical Society we may draw attention to the observations of Dr. Camillo Golgi (*Rivista Clin. di Bologna*). The pathological changes in a case of chorea are, according to him, the products of a chronic interstitial encephalitis. It should be remembered, however, that these changes found in chorea (thickening of the membranes, atrophy of the the convolutions—sometimes of the anterior, at others of the posterior lobes—increase of the granules on the vascular walls, sclerosis, fatty and pigmentary depositions, destruction of the ganglia in the grey substance) are exactly the same lately observed in dementia paralytica. We also have proof of the clinical relations between chorea and progressive paralysis. Thus Tomassi (1865) mentioned a case in which the symptoms of progressive paralysis alternated with those of chorea. Similar cases have been observed by Arndt and Meyer, and it is well known that in the course of progressive paralysis, especially in advanced stages, the motor disturbances are frequently choreaic.

Golgi considers the hysteria of his patient's mother and his own sexual excesses as of considerable importance in the etiology of his case. A diffuse meningitis with affection of the ependyma of the lateral ventricles occurred; the extension of this caused an interstitial or parenchymatous encephalitis, particularly in the convolutions and in the corpora striata; then a hyperplasia of the interstitial connective tissue, sclerosis, calcification of the nerve cells. In connection with the symptoms of chorea it is worthy of note that the motor centres, the fronto-parietal convolutions, the corpora striata, and the cerebellum were particularly affected.

TOPICS OF THE TIME.

THE ACTION OF CHOLAGOGUES.

The reports of the Scientific Grants Committee of the British Medical Association are at length being published in the *Journal*, though not very rapidly. At present those of Dr. Rutherford and M. Vignal, on the Biliary Secretion of the Dog, are being issued, and will excite the attention of the many practitioners who prescribe cholagogues.

Twenty years ago Kolliker and Müller tried the effect of calomel on dogs with biliary fistula, and they found that the amount of bile secreted was more often diminished than increased by the action of that drug. Two years afterwards Scott and Mosler found that in all cases large doses of calomel caused diminution of both the fluid and the solid constituents of the bile, and they failed to find the mineral in the secretion. Then came the report of Dr. Hughes Bennett in 1868, in which it appeared that the several preparations of mercury have no influence whatever upon the liver, except to reduce the amount of bile secreted, as was also seen to be the case in purgation by means of podophylline. Few experienced physicians, however, were inclined to accept the results of experiments on animals as a satisfactory proof of the exact mode of action of medicines upon man. Though the physiological evidence of the similarity of the effect of many drugs on man and some of the lower animals is constantly accumulating, it seems doubtful whether Dr. Bennett's conclusions have really influenced practice to any considerable extent. Still his work was so carefully done that those who still use mercury sometimes have misgivings.

In 1873 Rohrig published an account of a series of experiments which he had performed with the object of finding out what circumstances influenced the biliary secretion. He tried the effect of various purgatives on *fasting* dogs, and the results form a striking contrast with Dr. Bennett's. Rohrig did not use exactly the same medicines; but he found that several purgatives—viz, croton oil, colocynth, jalap, aloes, rhubarb, senna, and sulphate of magnesia, acted more or less powerfully on the liver, increasing the flow of bile, and recalling its secretion after it had ceased. As to calomel, he did not materially differ from Dr. Bennett, who found that in dogs kept on a regular diet, the amount of bile was always diminished by purgation; while Rohrig found that in *fasting* dogs the biliary secretion was notably increased by the same means. Can both these statements be correct? This is the question Dr. Rutherford and M. Vignal seek to answer by repeating Rohrig's experiments with an improved mode of procedure. They record the amount secreted every fifteen minutes, and the variations which occur are represented in the form of a curve. They also made frequent analyses, by which an accurate idea of the solid constituents of the bile could be formed; while the alimentary canal was carefully examined *post-mortem*, and the amount of intestinal irritation noticed.

Tested by this method, the report goes to show that croton oil did not appear to deserve so high a place as a hepatic stimulant as was accorded to it by Rohrig, and there was evidence of so much intestinal irritation, that its use was abandoned. Podophylline increased greatly the amount of biliary secretion, and was found to act more energetically when previously mixed with bile, which acted as a solvent. The marked increase in the amount of bile, attributed by Rohrig to the action of aloes, was in all respects confirmed by three experiments. Rhubarb proved a much more powerful hepatic stimulant than Rohrig's experiments led him to suppose; repeated doses causing renewed increase in secretion, and analysis demonstrating that, notwithstanding the great increase in quantity, the solid constituents were present in the same proportion as in the normal bile. Senna somewhat increased the amount of secretion, and at the same time rendered the bile more watery. Colchicum was found to act decidedly as a cholagogue, the rapidity of secretion being much increased. Scammony and taraxacum had also a cholagogue action, but in a less marked degree.

On the other hand, calomel failed to produce any increase in the biliary secretion, a decided diminution occurring in all but one case, and in every one the bile was rendered more watery. Gamboge and castor-oil had not a marked effect, while the secretion was diminished after alcohol had been injected into the stomach.

From these results it would appear that certain medicines given in proper doses to fasting dogs do cause an increase in the secretion of bile; but mercury is not one of these agents. This will surprise many who have been accustomed to regard calomel as the most certain of cholagogues. There are, too, some who have not looked upon rhubarb as a real stimulant to the liver, though many elderly practitioners will find their long experience of this drug confirmed by the report.

Energetic purgation seems to hinder the secretion of bile, and it is suggested that the diminution found by Dr. Bennett's committee to follow the administration of podophylline depended upon the fact that its severe purgative action impeded the absorption of food, and thus lessened the amount of bile formed. Any remedy which acts both as a hepatic and an intestinal stimulant to an animal before the process of digestion is complete has two distinct effects; first, to increase the amount of bile; and, secondly, to diminish the absorption of food and bile from the small intestine.

It is not pretended that these experiments settle the precise mode of action of these cholagogue medicines, but some reasons are adduced for believing that the agents are absorbed into the portal circulation, and act on the liver directly in passing through that organ.

GUARANA.

There is nothing new under the sun. Guarana, which some people call the new remedy for headache, is an old nervine revived, and a great deal was known about it—in fact, as much as now—before Dr. Wilks introduced it. The word is derived from *Guaranis*, the name of a tribe from whom it was formerly exclusively obtained. They employed it in diarrhœa and dysentery, and from them the other natives of Brazil obtained it. They kept its mode of preparation secret; but it is believed to be obtained from the resinous juice and seeds of the *Paullinia sorbilis*, a Brazilian climbing plant, also from the *Paullinia cupana*, which flourishes on the banks of the Oronoko. These plants belong to the natural order Sapindacea, and were named after Professor Pauly of Copenhagen. Their uses were described in 1848 in Hooper's "Medical Dictionary," and before that by Dr. Gavralle, physician to Don Pedro of Brazil. It is met with in rolls or cylinders, which look like Bologna sausages, and also as a brownish powder. Sometimes, instead of the cylinders or rolls, the substance is fashioned into various forms, as snakes, lizards, birds, cups, &c.

Martins discovered its active principle, guaranine, which was shown by Berthemot and Deschasdelus to be isomeric and probably identical with caffeine and theine. Of this, coffee contains ¼ to 1 per cent., gunpowder tea 1 to 3, black tea rather more, Paraguay tea 1 to 2, and guarana 5 per cent. Guaranine is soluble in ether, alcohol, and hot water, but only slightly soluble in cold water. Its salts and double salts are crystalizable, but some of them are decomposed by water. Probably the alkaloid or salts may supersede the crude drug. The experiments of Professor Hughes Bennett at Edinburgh show that it possesses very defined therapeutical properties, and suggest that it might be employed hypodermically as an antidote to opium-poisoning.

Some interesting information respecting guarana may be found in a lecture by Professor A. H. Kollmyer, published in the *Canada Medical Record*, to whom Mr. H. R. Gray, President of the Montreal College of Pharmacy, has furnished some memoranda respecting its action upon himself.

Mr. Gray thinks it is more allied to tea than coffee, for coffee always gives him headache, while tea relieves it, and guarana nearly always cures it. He has met with several persons whose experience agrees with his. He finds the ordinary commercial drug less effectual than Grimault's, which latter does not produce the griping pain in the bowels which sometimes follows the use of the ordinary drug, in which he usually found some iron was present.

Dr. Kollmyer recommends guarana as a tonic, astringent, antispasmodic, and anodyne. A patient of his, thinking there must be something insoluble in water which necessitated swallowing the powder, as the infusion did not act so well, tried powdered tea as a substitute, and found it produced the same effect, but in a less degree, perhaps because he took a smaller quantity. Dr. K. mentions the case of a druggist who took guarana in half-drachm doses twice or three times a day for more than three months. He had suffered for a long time with pain in the head and other symptoms, following a mental shock, and says that when he had taken a powder but a short time he felt as if a weight had been removed from his head and he had taken a glass of wine.

Gavralle employed guarana in diarrhœa and dysentery, in the diarrhœa of phthisis, in paralysis, chlorosis, and as a tonic in tedious convalescence from various diseases. Dr. Ritchie, R.N., recommended it as a substitute for buchu, uva ursi, and pareira brava in irritation of the bladder, &c. M. Leconte says that for sick headache it scarcely ever fails. It is in those forms of headache commonly called bilious or nervous that it is most effectual. As recently pointed out in The Doctor, it has also been highly recommended in cases of a rheumatic character, and as possessing special power over lumbago. It has occasionally eased the pains of chronic rheumatism.

It is mostly given in powder, though some make an infusion and take with milk and sugar as an ordinary cup of tea, though in such a case the grounds ought to be taken. In Beasley's Formulary a chocolate is recommended (1 oz. to 16), and Messrs. Savory and Moore have lately brought out a Guarana Chocolate. It may be easily taken in pill. An alcoholic extract would be a good preparation, and Gavralle gave it in lozenges. Messrs. Probyn and Co. have prepared a fluid extract which may be relied upon. The alkaloid, guaranine, has been given in doses of one to three grains, alone or in solution with citric acid. Hager says this solution does not contain a citrate. Dr. Gastriel, of Cairo, used the arseniate as a substitute for quinine in intermittents. *Did the arsenic do the good?* We suspect it did.

ABOUT BOOKS.

Lectures on Dermatology. By Erasmus Wilson, F.R.S., F.R.C.S., &c. London: J. and A. Churchill. 1875.

The volume before us contains the lectures delivered by Mr. Erasmus Wilson, the Professor of Dermatology at the Royal College of Surgeons, during the sessions of 1874 and 1875. The plan of these lectures is to treat consecutively of the whole of the diseases of the skin in the most convenient order, beginning with diseases of inflammation, common and specific, then taking diseases due to aberration of nutrition and sensation, and proceeding onwards to disorders of pigmentation, diseases of the epidermis and nails, of the cutaneous glandular system, and of the hair. We need not enumerate all the diseases treated of in the present volume, and only note a few, as lupus, leprosy, xanthelasma, morphœa, and dermatolysis. We observe that Mr. Wilson not only gives us his own views on pathology, but also quotes the observations of others. The part devoted to treatment is very full, and will well repay perusal, especially coming from one of recognised authority on cutaneous diseases. We may note that our author thinks highly of Dr. Dougall's treatment of leprosy by means of gurjun balsam; useful not only in leprosy, but also in some forms of lupus. The gurjun liniment (equal parts of gurjun balsam and lime-water) is nearly a specific.

"A special purpose of these lectures," our author tells us, "is to afford the opportunity of comparing the descriptions of the disease with the object itself as preserved in the Hunterian Museum, to challenge inquiry, and to confirm or refute theory and preconceived conviction by an appeal to facts." Whether the professor's lectures are of the kind to do this we do not attempt to say; but he has made a move in the right direction in gaining an official recognition for an important and hitherto neglected branch of medicine—dermatology—and all true lovers of their profession must feel thankful to Mr. Wilson for what he has done.

The Anatomy of the Lymphatic System. Part II. The Lung. By E. Klein, M.D. London: Smith, Elder, and Co. 1875.

The second part of Dr. Klein's elaborate work on the lymphatic system is even more interesting than the first, which has already been reviewed in The Doctor. It is devoted to the lung, and enters upon the great subject of tuberculosis. This volume, like the former, is based on researches undertaken for the Medical Department of the Privy Council, and the magnificent plates with which it is illustrated have been executed at the expense of the Government Grant Committee of the Royal Society. A brief summary of the results of these researches has already been published in the "Proceedings of the Royal Society," so that it is not necessary to enter at length into all the conditions investigated, but we must express our pleasure that such work has been done, and our satisfaction with the manner in which Dr. Klein relates his labours. The investigation naturally divides itself into two parts—viz.; normal and pathological conditions. With regard to the first we need only say that a careful investigation of the minute distribution of the lymphatics of the lung was absolutely necessary as a preliminary to the consideration of tubercles. This has been carried out by Dr. Klein as to the pulmonary pleura as well as to the lung proper, and this part of the work will be perused with great interest. It is, however, to the second part that many will attach the greatest importance, since here, as we have said, Dr. Klein enters upon the changes which occur in chronic diseases of the lungs, and discusses the relation of its lymphatics to tuberculosis. He quotes with approval the works of Buhl and Hering; but in several important particulars he is led to differ from both, and he has carefully examined the lungs of seven children who died from acute miliary tuberculosis. In two of these the microscopic appearances corresponded with Buhl's description of desquamative pneumonia; in others they differed in several respects, leading Dr. Klein to conclude that these differences represented later stages of the disease. Much discussion has been devoted to the origin of giant cells, which have been declared to arise from various tissues, and which Hering asserts are no cells at all. Dr. Klein sees only two possible modes of origin, either from colourless blood corpuscles or from epithelial cells lining the alveolar cavities, and he seems to lean to the latter. He finds that not only giant cells in general, but those of tubercles in particular, have different modes of origin in different organs. We must therefore exclude all except those which originate in tubercles of the lung only. That these are true cells—generally of a spherical, oblong, or irregular shape, and that they may be isolated by teasing, Dr. Klein is completely satisfied. He therefore rejects Hering's conclusion. There are a great number of other points discussed, all of them in a masterly manner. We need, however, say no more, as histologists and medical men will alike be glad to study the work itself.

Coleccion de Articulos y Observaciones Clinicas sobre varias Enfermadades de los Ojos. By Dr. Luis Carreras y Arago, Professor of Ophthalmology in Barcelona. Barcelona. 1875.

Dr. Luis Carreras y Arago has sent us his interesting work, and it contains an excellent *résumé* of what is known about syphilitic iritis. It is important to observe that, notwithstanding the many obstacles science has to contend against in Spain, it yet manages to silently insinuate itself among all European populations, thus preparing a brighter future for the race.

Syphilitic iritis, according to our author, is always the result of a general syphilitic affection, and it may be *primitive* or *secondary*—primitive, when the iris is first of all affected; and secondary, when the choroid and other membranes of the eye are affected first of all. Syphilitic iritis may be due to a congenital affection, and Lawrence, Walker, Dixon, and Hutchinson have shown that iritis is not infrequently seen in hereditary syphilis.

Syphilitic iritis never commences before seven weeks, and in the greatest number of cases some months or years elapse after the contracted ulcer before it appears. It is a sign that announces the early passage of secondary into tertiary syphilis. Occasionally, although rarely, it accompanies the tertiary period of the disease.

Symptoms.—There is at first generally pain in the orbit, especially nocturnal pain. The ocular conjunctiva is rarely normal, but generally covered by arborescent vessels, and in some cases with all the symptoms of intense inflammation. The sclerotic forms a rosy circle around the cornea. The cornea is sometimes healthy, but occasionally shows spots of keratitis. The membrane of Descemet may be inflamed, and the aqueous humour turbid.

The iris changes in colour, the pupil irregular, more or less contracted, sometimes forming a complete atresia. The alterations of the membrane are most marked on the internal edge of the pupil, which presents a russet tint, and which, because of the serous exudations which flow from the vessels of the iris, presents several pseudo-membranes, which, in rare cases, may form anterior synechiæ with the cornea, but which generally adhere to the capsule of the crystalline, constituting posterior synechiæ, which later on, when the inflammation of the iris disappear, prevent it from recovering its former mobility. Sometimes the inflammation attacks the lens, and renders it opaque, although it is more commonly propagated to the choroid, and gives rise to choroiditis which, pouring out exudations on the retina, covers it, and compresses it, producing blindness. It may also alter the vitreous, and in some cases the globe of the eye is deformed, the anterior and posterior chambers become injured, and the eye becomes atrophied.

One of the complications which are generally afforded by grave syphilitic iritis is abscess of the iris (condyloma). This is only a gummy tubercle of the iris, such as those seen in other parts of the body. It is never seen in any other kind of iritis. It may be of various sizes—from that of a grain of millet up to that of a large pea. In this case it has the aspect of the crystalline dislocated and lying in the anterior chamber; sometimes it may touch the cornea. Its most common termination is by resorption. The iris retracts its walls, and breaks sometimes some of the ciliary insertions, on account of the barrier to retraction caused by the false membranes which make it adhere to the crystalline. There are, however, occasions where the abscess opens into the anterior or posterior chamber, which aggravates the inflammation, whilst in some rare cases the abscess opens externally.

This disease may be divided into three kinds—serous, plastic, and condylomatous. It may be acute or chronic When acute, it is accompanied by interior febrile symptoms; the individual loses appetite, is seized with thirst, sweats, and has pain augmented, especially at night. If the inflammation have reached the choroid and retina, the patient has loss of vision in proportion to the compression of the retina. When chronic, there is noticed only a slight deformity with change of colouration of the pupil, no pain nor photophobia.

Abandoned to the power of nature, syphilitic iritis is rarely cured, says our author; on the contrary, the inflammation extends to the other membranes of the eye, and the patient becomes blind, not only from occlusion of the pupil, but also from insensibility of the retina and consecutive atrophy of the eye.

As a consequence of syphilitic iritis, we are wont to observe deformity of the pupil, which frequently remains permanent, anterior synechiæ and posterior synechiæ of the pupil; sometimes exhibiting deformity in the eye such as staphyloma of the choroid, opacity of the humours, and insensibility of the retina, with, in some cases, atrophy of the eye.

Diagnosis.—The diagnosis follows from the general condition of the patient, and the brownish tint of the iris, and the deformity of the pupil.

Prognosis.—Syphilitic iritis is very dangerous, and we must be reserved in our prognosis. It is cured more easy in robust persons than in weak persons. In chronic cases, when vision has remained abolished for some time, it is generally incurable; but, if remains of sight have been left and the case be recent, hopes may be entertained from therapeutic remedies.

Treatment.—In slight cases the treatment must be chiefly general with exception of atropia drops to distend the pupil. If the case be severe, local remedies must be more prompt, and leeches are useful in some cases. Our author recommends in such cases calomel in doses sufficient to cause ptyalism, as also the inunction of mercurial ointment into the supra-orbital arch mingled with belladonna. In grave cases it is indispensible to rapidly cause salivation by injecting mercury endermically, whilst mercurial frictions are made over the arms and axillæ twice daily. When the inflammation subsides the bichloride of mercury is recommended, with the bromide and iodide of potassium.

In criticising this description of Dr. Carreras y Arago, we would observe that occasionally syphilitic iritis requires but little heroic treatment. Many cases, indeed, do very well without general medication, and require only the instillation of the atropia drop many times daily. Rubbing in of mercurial ointment in the axillæ is perhaps the best method of placing the patient under the influence of mercury; but we cannot agree that the influence should go the length of producing salivation.

Introductory Lecture at the London Hospital. 1875-6. Wertheimer and Co.

We have received a copy of Dr. Bathurst Woodman's address, which has happily just been published. It is one of the most learned, and yet one of the most practical introductories, and we should be glad to know that every medical student had attentively studied it.

The Visiting List. 1876. London: John Smith and Co.

We may remind our readers that the useful pocket companion published by Messrs. Smith has now reached its thirtieth year. The new issue for 1876 is ready, and we shall ourselves continue to use it, for it has been to us, for several years, a great convenience. It is suitable for every doctor, whether physician, surgeon, or general practitioner.

IN THE LABORATORY.

TEREBENE.

Dr. F. T. Bond, of Gloucester, is the introducer of this deodoriser, which may be used internally, and perhaps will rival salicylic acid. We have lately made use of terebene in the sick-room, and have found its odour agreeable to the patients. No doubt many of our readers will try it.

Terebene is an isomer of terebenthene, one of the constituents of oil of turpentine, from which it is obtained. It is a liquid, which differs considerably in its characters according to the way in which it is prepared, but which has a more or less amber colour, and an odour, when examined in mass, which, though terebinthinous, is quite distinct from that of turpentine, being distinctly camphoraceous, and generally compared in manuals of chemistry to that of oil of thyme, with which chemically it is almost identical. When exposed to the air it gives off an aroma of a different kind, quite peculiar to itself, and which is not unlike that of pine-wood. This peculiar odour is probably the result of partial oxydation, for during its evolution the air gives distinct evidence of the presence of ozone. When water is at the same time present, peroxide of hydrogen appears to be formed and to be absorbed by it. It is probably to these facts that the powerful deodorising effects of terebene are in a great degree due. It is not inappropriate to mention in connection with the peculiar pine-wood odour of terebene, that attention has been lately drawn by several writers, especially by Dr. Day, of Geelong, Australia, to the ozonising properties of pine-wood, and to its value as a material for the construction of hospitals for infectious diseases. In fact, Dr. Day attributes to it disinfecting properties of a high order. Whether this is so, or not, may be open to doubt; but that it possesses very efficient deodorising properties is within the observation of anyone who has noticed the effect which fresh pine saw-dust has on offensive masses.

Dr. Bond finds that, like most of the members of the class of organic bodies to which it belongs, terebene has very distinctive antiseptic properties when employed under favourable conditions. Practically, however, its antiseptic action is somewhat diminished by reason of volatility. Moreover, as it is only slightly soluble in water, it does not lend itself to concentrated use for this purpose unless applied directly, or in combination with oil, with which it mixes readily. Hence, although sufficiently antiseptic for all ordinary purposes, it is not generally applicable where prolonged prevention of putrescence is desired. It does not possess the poisonous properties of carbolic acid. Indeed, it may be taken internally in doses of 5-20 minims without producing any other obvious effect than the almost complete dissipation of the offensive odour of the fæces, though it appears also to act somewhat as an astringent on the alimentary mucous membrane. When applied directly to a raw surface, such as that of a wound or ulcer, it not only removes all offensive odour, if there be any, but seems to act as a stimulant to healthy action, surfaces that have previously been inert exhibiting a tendency to rapid cicatrisation. These properties would indicate that, apart from its value as a disinfectant, terebene has considerable recommendations, both for surgical and medical purposes.

AT THE SOCIETIES.

AT THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

At the first meeting of this Society (October 12th) the chair was taken by the President, Sir James Paget. Pressure on our space prevented us from publishing our notes of this and the following meeting in our last issue. The interest of the proceedings is, however, such that we now supply the omission.

THE PATHOLOGY OF CHOREA.

A paper on the "Pathology of Chorea" was read by Dr. Dickinson, who does not accept the theory of embolism, and describes widespread changes—chiefly of hyperæmic nature—in the nerve centres similar to those which he has met with in diabetes. He described the morbid appearances found in seven fatal cases of chorea to show that the changes were remarkably constant in kind and place. In *kind* the changes were all (allowing sclerosis to be so) directly connected with vascular disturbance. The injection was general to vessels of every kind, but most marked in the arteries; when the sources of exudation or of hæmorrhage could be determined, they were always arterial; the degenerations were usually periarterial, and the spots of sclerosis similarly placed. The first visible change would seem to be injection or distension of the arteries, this being succeeded by extrusion of their contents, to the irritation or injury of the surrounding tissues. In *place* the changes affected both brain and cord, the cord perhaps the most severely. Chorea was regarded as depending upon a widely-spread hyperæmia of the nervous centres, not due to any mechanical mischance, but produced by causes mainly of two kinds, one being the rheumatic condition, the other comprising various forms of irritation—mental and reflex—belonging especially to the nervous system. Given the irritant, mental, reflex, or rheumatic, the course of the disease had been sufficiently traced in hyperæmia and its results. The spots of perivascular change were widely scattered through that large region which lies inferiorly to the cerebral convolutions, between the corpora striata and the lower part of the cord, the district of the motor and sensory as distinguished from the mental functions. The result, chiefly in muscular excitement rather than in paralysis or loss of sensation, was associated with the character of the lesions which were points of irrition rather than planes of sections, and calculated not so much to cut off as unnaturally to excite nervous function. In looking at the nature of the lesions, proceeding, as they do, from vascular distension to perivascular change, it was not possible but to connect them with those of a large group of nervous disorders, prominently with those of diabetes. In diabetes the changes are of similar origin and character, though usually seen at a later stage, and attended with more excavation. They are, however, somewhat differently disposed in the two disorders; in both they are widely distributed, in diabetes the stress falling upon the brain, in chorea upon the cord. Every period of life has its own region of nervous susceptibility; in childhood the motor, in adolescence the emotional, in advancing years the mental, and, coevally, or nearly so, that part of the nervous mechanism which instigates glycosuria. Much the same mental impression may make a child choreic, a girl hysterial, or a man diabetic, and thus, both in external origin and in the nature, though probably not in the site, of the organic changes, we see resemblances and alliances between nervous disorders which in their symptoms betray little similarity.

Dr. **Broadbent** said that, whereas Dr. Dickinson would define the pathology of chorea as a generally distributed hyperæmia of the nervous centres, and especially of the cord, yet he (the speaker) would rather localise it in the corpora striata. No mention had been made in the paper of derangement of sensation, which is often diminished to a considerable degree in hemichorea, and probably much lowered in the general form, since, the patients often endured the formation of bedsores without apparent suffering. Then, in bad cases of chorea, there was often violent delirium, and this with a low temperature, and in some cases, aphasia. All these variations showed a variability in the site of the hyperæmic condition. Dr. Dickinson seemed to have overlooked the fact that the embolism is capillary, and he (the speaker) remembered one fatal case of rheumatic chorea with delirium, in which there was plugging of minute vessels of brain with decolorised clots.

Dr. **West** thought that at present we were not in a position to establish, from pathological observation alone, the nature of a disease in which the mortality was so small as 1 per cent. He himself had only seen four autopsies. The conditions described were not peculiar to chorea; much the same changes were found in trismus of new-born infants, and, on the other hand, there were cases of chorea in which such appearances have not been observed. Rivière had drawn attention to the fact that whereas in Geneva rheumatism was frequent, chorea was rare. The very frequent association of endocarditis with rheumatism must be borne in mind. Occasionally, too, chorea is followed by rhematism. Then, even in slight cases of chorea, there was sometimes long-continued mental enfeeblement long after the cessation of the choreic movements.

Dr. **Hughlings Jackson** maintained the view that embolism was the cause of chorea. In two cases he had found emboli in the small arteries, but it was right to add that he was aware of two other cases in which no such lesion was found. Dr. Bastian had found plugging of small arteries (which he attributes to thrombosis) in the corpus striatum in three cases. He thought that the pathology of chorea was still an open question, and was glad to find Dr. West expressed the same opinion. But there were many arguments in favour of embolism. The changes described by Dr. Dickinson were not inconsistent with tne theory of embolism. In chorea the seat of the lesion was probably in the corpus striatum—the chosen spot for embolism.

Tuesday, October 26th, 1875.

ON THE USE OF THE ACTUAL CAUTERY IN THE ENUCLEATION OF FIBROID TUMOURS OF THE UTERUS.

By Robert Greenhalgh, M.D.

Dr. **Greenhalgh** gave the details of five cases—three of intramural, one of extramural, and one of intrauterine fibroid growths, with the plan adopted, and the results in each case. He drew especial attention to the three following points. Firstly, the advisability of the gradual detachment of the growth from its surrounding capsule, especially in cases where the tumour is of large size, or where the patient has been much reduced by previous hæmorrhages, by which further losses of blood are avoided, and more perfect contraction of the investing tissues is secured, and the chances of pent-up offensive discharge is almost certainly prevented. Secondly, the removal of only so much of the tumour at each operation as is external to the opening, by which the opening is kept dilated, and all chance of its closure upon the remainder of the growth avoided. Thirdly, the speedy destruction by the cautery, or removal by the écraseur or hand, of the tumour, should sloughing ensue.

Dr. **Alfred Meadows** thought that the plan of treatment recommended by Dr. Greenhalgh was valuable, but there would be difficulty in selecting suitable cases.

Dr. **Barnes** agreed as to the difficulty of distinguishing the cases proper for operation. In some instances, the dangers of meddling had been illustrated, although there had been no means of knowing them beforehand. Tumours attached to the cervix uteri were readily treated by various means; but the case was very different when the tumour was situated in other parts of the uterus.

AN ORIGINAL VIEW OF THE LARYNGEAL MOVEMENTS, ACCOMPANIED BY A NEW MOVABLE MODEL.

By Edmund J. Spitta, M.R.C.S.

The model illustrated the present theory by exhibiting mechanically the two operations of the larynx under which all its movements might be included—viz., the tensing and relaxing the cords and the opening and closing the glottis. The new view principally concerned the last-named operation. The author held, in the first place, from the construction of the crico-arytenoid joints, that neither forward nor rotatory movements of the arytenoid cartilages are possible, and that these cartilages can only move laterally, but that by this very movement the interval between the vocal cords is horizontally increased and the glottis opened. He then described the laryngeal muscles, and how they effect the two operations above-named, giving them fresh names in accordance with their actions; the arytenoideus, for example, was called the occludens, and the posterior and lateral crico-arytenoid together the patefaciens. Lastly, according to the author, a remarkable, though totally unexpected, corroboration of the truth of his view was derived from the peculiarity in distribution of the laryngeal nerves.

Mr. C. **Brooke** called attention to the fact that Mr. Spitta had not represented the membranous portion of the vocal cords. The late Professor Willis had shown that, unless the upper edges of the membrane were rendered parallel, vocal vibrations were not produced, although the glottis was closed.

Mr. **Nunn** remarked that the principal point was the articulation of the arytenoid cartilages.

Dr. **Whipham** had never been able to satisfy himself of the rotation of the arytenoid cartilages.

Dr. **Spitta** said that the membranous parts of the cords had been omitted on account of certain difficulties, especially that of obtaining a membrane to stretch equally.

Tuesday, November 9th, 1875.

DIPHTHERIA AND CROUP.

Dr. **Semple** read a paper on "Diphtheria," urging the following conclusions:—That the terms croup and diphtheria are not to be regarded as synonymous, but that the term croup, as generally employed, comprises at least three very different affections, namely—1, laryngismus stridulus; 2, infantile laryngitis; and 3, tracheal (or, rather, laryngo-tracheal) diphtheria. That diphtheria (although under many different names) has probably existed from all antiquity, and although its features have not been described with sufficient distinctness by the ancient Greek and Roman medical writers, its epidemics have been clearly indicated by Spanish, Italian, Sicilian, French, German, Swedish, American, and British authors from about the end of the 16th century to the present day. That diphtheria as an epidemic did not visit London until about the year 1858 or 1859, the last European epidemic being that present in Florence and its neighbourhood in

1869-70. But although diphtheria as an epidemic has prevailed only at fitful and irregular intervals in the history of the world, sporadic cases have always existed.

Dr. **West** said hitherto his opinion had been that the diseases were essentially distinct—the one being a local inflammatory disease of the larynx, the other being due to what might for want of a better name be termed a blood-disease—a constitutional affection. This belief he still held, although he must confess his belief was by degrees growing less positive than before. The question could not be settled satisfactorily by any one or more observers acting independently, and he urged the appointment of a committee to inquire into and report upon the subject. The points requiring settlement might be stated as follows :—1. Do the two affections prevail epidemically at the same time? 2. Do the two prevail at the same time, and in the same locality, or is their locality different? Thus, it is well known that croup is far more prevalent in rural than in urban districts—the proportion of cases met with, for example, in Sussex and Cumberland being to those in Liverpool as three to one. 3. Does it ever happen that of two members of a family attacked at the same time the one has "croup" and the other "diphtheria"? 4. Is the disease "croup," as described by Cheyne, ever accompanied by albuminuria, and if so to what extent? 5. Are both diseases followed by symptoms of disorder of the nervous system?

Sir **William Jenner** said that he, like Dr. West, had held for a long time that croup and diphtheria were distinct diseases, and had published that opinion ; but a larger experience, among all classes of persons, had compelled him to alter those views. It now seemed to him that the evidence is all but absolutely conclusive on the other side. He would hesitate to say it was proved, but the facts were strongly in favour of the doctrine of identity. The grounds which led him to change his opinion were as follows :—1st. Albuminuria, a symptom held to be characteristic of diphtheria, he had seen in genuine "croup"—croup coming on with catarrh, with no exudation in the pharynx. He had seen several times in such cases the urine loaded with albumen. 2nd. He had seen a surgeon in attendance on a case of diphtheria contract laryngo-tracheal membranous disease, and, moreover, in that case the paralytic sequelæ followed. 3rd. Then the *sthenic* character of croup was not distinctive, for some cases of membranous pharyngitis (diphtheria) presented as great force of febrile disturbance as he had ever seen ; and, speaking generally, he could not believe that diphtheria was so asthenic as commonly taught. The fact that paralytic sequelæ never or rarely followed croup was easily explained, because as soon as diphtheria attacks the larynx recovery is infinitely rare. With respect to the distinction between croup and diphtheria as to *cause*, Sir William stated that he had met with cases of true diphtheria which undoubtedly came on from exposure to cold, and he quoted two instances of this.

Dr. **Dickinson** held that the two diseases were distinct.

Dr. **Semple**, in closing the debate, expressed his gratification in a long and animated speech at the course in which opinion was tending, as confirmatory of much that he had long held and ennunciated on other occasions—viz., that laryngeal diphtheria and membranous croup were identical, a view which he thought was fully borne out by the historical investigations that formed the basis of his paper.

It was referred to the Council to consider the expediency of appointing a committee.

AT THE CLINICAL SOCIETY.

ANTISEPTIC SURGERY.

The Clinical Society has so far occupied itself with a series of rather desultory discussions on this subject. These, however, can lead to no definite conclusion, and a full report would be of slight interest. Numerous cases have indeed been related, but in scarcely any was the system of Prof. Lister completely carried out. It is obvious, therefore, that they cannot tend to bring the question to an issue. The use, for instance, of carbolised ligatures for the ligation of arteries can lay no claim to be Lister's system. On the other hand, the success of cases treated by minute care, such as Mr. Callender employs, lends support to those who regard this care as more important than the use of antiseptics. From what transpired at these meetings, it would seem that hitherto London surgeons have not extensively tried Lister's method.

AT THE MEDICAL SOCIETY OF LONDON.

Several interesting papers and cases have been brought before this Society. Of these, Mr. Carter's and Dr. Drysdale's may be mentioned as most important—the first to oculists, the second to all doctors. This was on animal vaccination, and the author found several able supporters among the speakers. This Society now publishes "Transactions." It would be a wise plan to furnish the journals, not only with the bound volume, but with the reports of each meeting soon after it takes place.

NOTES, NEWS, AND GOSSIP.

A Bullet in the Brain.—The manager of a New Jersey paper has for the last seven months been known as "The Editor with a Bullet in his Brain." He was shot in his own office in March last, and recovered so completely that his assailant was released on bail, but relapsed, and died on the 24th of last month. A post-mortem examination was made, and "the bullet was found encrusted within the tentorium, beneath the posterior lobe of the right hemisphere." Three abscesses were found on the right hemisphere, there was marked congestion of the pia mater on the floor of the right ventricle, especially on the right side ; the cerebellum was wholly uninjured. The opening (made by the bullet) was an inch to the right of the occipital protuberance, and half an inch above the groove of the right lateral sinus.

Professor Maclean on Warburg's Tincture.—By request of Dr. Warburg, the composition of his tincture is now made known in a letter to the *Lancet* by Prof. Maclean, who thinks it of great value.

It will be seen that quinine is the most important ingredient in the formula, each ounce bottle containing nine grains and a half of the alkaloid. Its presence has been detected by every chemist who has attempted its analysis, and never doubted by any medical man of experience who has used the tincture. Many will say, "'After all,' this vaunted remedy is only quinine concealed in a farrago of inert substances for purposes of 'mystification.'" To this objection, writes Dr. Maclean, "my answer is, I have treated remittent fevers of every degree of severity contracted in the jungles of the Deccan and Mysore, at the base of mountain ranges in India, on the Coromandel Coast, in the pestilential highlands of the northern division of the Madras Presidency, in the malarial rivers of China, and in men brought to this hospital from the swamps of the Gold Coast, and I affirm that I have never seen quinine, when given alone, act in the manner characteristic of this tincture ; and although I yield to no one in my high opinion of the inestimable value of quinine, I have never seen a single dose of it given alone, to the extent of nine grains and a half, suffice to arrest an exacerbation of remittent fever, much less prevent its recurrence, while nothing is more common than to see the same quantity of the alkaloid in Warburg's tincture bring about both results.

"The tincture is administered in the following manner :—One half ounce (half of a bottle) is given alone without dilution, after the bowels have been evacuated by any convenient purgative, all drink being withheld ; in three hours the other half of the bottle is administered in the same way. Soon afterwards, particularly in hot climates, profuse, but seldom exhausting, perspiration is produced ; this has a strong aromatic odour, which I have often detected about the patient and his room on the following day. With this there is a rapid decline of temperature, immediate abatement of frontal headache—in a word, complete defervescence, and it seldom happens that a second bottle is required. If so, the dose must be repeated as above. In very adynamic cases, if the sweating threatens to prove exhausting, nourishment in the shape of beef-tea, with the addition of Liebig's extract and some wine or brandy of good quality, may be required.

"In the terrible remittent fevers described by Livingstone and his followers, the form of purgative prescribed by the great traveller, and known to his people as "Livingstone's Rousers," may be premised. By no authors is the necessity for careful nutrition and due stimulation so much insisted on as by the companions of this immortal explorer, notably by the Rev.

Mr. Waller, who, I believe, is a physician as well as a missionary.

Dr. Warburg's Tincture.

℞ Aloes (socotr.) libram,
Rad. Rhei (East India),
Sem. Angelicæ,
(*a*) Confect. Damocratis, ana uncias quatuor;
Rad. Helenis (s. Enulæ),
Croci sativa,
Sem. Fœniculi,
(*b*) Cret. præparat., ana unc. duas;
Rad. Gentianæ,
Rad. Zedoariæ,
Pip. Cubeb.,
Myrrh. elect.,
Camphoræ,
(*c*) Boleti larici, ana unciam.

The above ingredients to be digested with 500 ounces of proof spirit in a water-bath for 12 hours; then expressed and ten ounces of disulphate of quinine added; the mixture to be replaced in the water-bath till all quinine is dissolved. The liquour, when cool, is to be filtered, and is then fit for use.

The Coca Leaf.—Sir Robert Christison has related to the Edinburgh Botanical Society some experiments he has made to test the "coca leaf," which is not to be confounded with the well-known cocoa. In Peru, where coca grows, it is reported to have remarkable nourishing properties; and, in order to ascertain the precise nature of these, Sir Robert chewed the leaf by way of stimulant on the occasion of two ascents of Ben Voirlich. On reaching the top, he felt greatly fatigued, and began to chew his coca; with the result, that he was able to make the descent, not only with firmness, but with almost juvenile elasticity. He further stated, that by its use he had found himself able to walk sixteen miles with ease, although when he attempted this feat without such nourishment he felt greatly fatigued.

The Edinburgh Meeting from an American Point of View.—The editor of the *Nashville Medical Journal* was present at Edinburgh, and thus writes:—"As a matter of course we cannot go into a discussion of the papers read before the various sections. There was much that was good, and abundance of trash. If you will except the physiological section, there is more originality and activity of thought in one of our well-organised State bodies than in all this mighty medical machinery which grinds out dogmas from year to year. We say this at the risk of being for ever ostracised from British medical circles, for, of all organisations in the world, this Association is the most inflated. Verily they believe that 'they are the world, and wisdom will die with them.' They are patronisingly courteous to their foreign members and visiting brethren; indeed, they are perfect Hezekiahs for showing off their jewellery; and if you will just hurrah for the Queen, and keep your own thoughts in the background, every now and then kissing the shrine of Edinburgh, you'll be a hero here. But the man that asserts that the British Medical Association contributes more to the cause of medical science than her despised sister body across the water, is either a drivelling sycophant or a blinded ass."

Photographing and Telegraphing Symptoms.—At the Brussels Congress, Dr. Stein, of Frankfort, exhibited a method of photographing the pulse, and also a plan of telegraphing the changes of the temperature in any patient's axilla to any part of an hospital, and there recording the variations by photography.

The Ladies at Edinburgh.—Professor T. O. Summers, among other equally severe remarks, writes:—"The pragmatic forwardness and officious pertinacity of the women who were allowed to read papers at the last meeting of the British Association ought certainly to settle the question with us as to their introduction into our medical and scientific circles. They are nuisances. We were bored with the scientific phizzing of several of these sexual anomalies in the Anthropological Section, but submitted to the infliction on the ground of the distinction between *anthropos* and *aner*, giving them somewhat of a show for representation, but it was too much for us when we were compelled to listen to a long drawn out intuitional discussion of the origin of the lymphatics in the Section of Anatomy. We feel like bringing out our litany whenever crinoline and anatomy come together. It is a significant fact that women have never been discoverers or inventors. They do everything by intuition, and are not capable of pronouncing upon even the simplest facts that come under their observation."

New Journals.—Two new papers have just been added to the Paris medical press, the one, entitled *Journal d'Hygiène*, bi-monthly, edited by Dr. de Pietra Santa; the other, entitled *Paris Médical*, weekly, has Dr. Fort for chief editor.

OBITUARY.

Allarton.—On the 29th October, at South Molton, George Allarton M.R.C.S.E., aged 6d.

Atkins.—On the 19th October, at Hadleigh, Suffolk, Alfred W. G. Atkins, L.R.C.P.Ed.

Badger.—On the 23rd October, at Sydenham, Wildsmith Badger, L.S.A.

Bennett.—On the 30th October, at Oxford Street, W., Thos. Tyrwhitt W. Bennett, Surgeon, aged 56.

Broxholm.—On the 29th October, Catherine, the dearly-loved wife of Frederick G. Broxholm, M.D., of Richmond Road, Barnsbury, N.,—deeply regretted.

Cross.—On the 26th October, at Caledonian Place, Clifton, Wm. Cross, F.R.C.S.E., aged 65.

Davis.—On the 2nd November, at Linden House, Winkleigh, Devon Wm. H. Davis, M.R.C.S.E, aged 44.

Dwyer.—On the 13th October, at Tuam, James Dwyer, M.R.C.S.E., aged 58.

Green.—On the 29th October, at Parliament House, Peckham, Dr. Marryat H. Green, aged 22.

Griffith.—On the 8th November, at Woodpark, Rathmines, Walter Griffith, F.R.C.S.E., of Guildford Street, Russell Square, W., aged 77.

Hammond.—On the 3rd November, at Market Street, Cambridge, J. Hammond, F.R.C.S.E. aged 72.

Jameson.—On the 14th November, at Sturry, Kent, William Jameson, M.R.C.S.E., aged 78.

Lees.—On the 10th November, at Hodnet, Salop, B. Lees, L.S.A.L., aged 64.

Lloyd.—On the 2nd November, David Lloyd, M.R.C.S.E., of Carmarthen.

M'Coy.—On the 5th November, Simon Henry M'Coy, F.R.C.S.I., late Professor of Materia Medica, Queen's College, Galway, aged 60.

M'Loughlin.—On the 26th October, at the Lodge, Roscommon, Helena, the beloved wife of Henry B. M'Loughlin, M.D., aged 24.

Mease.—On the 3rd October, at Infirmary House, Cavan, Emily, wife of Andrew Mease, Surgeon, co. Cavan Infirmary, aged 56.

Part.—On the 1st October, at Camden Road, James Part, M.D., aged 66.

Passmore.—On the 4th November, at Brighton, John George Passmore, M.R.C.S.E., aged 59.

Plant.—On the 24th October, at his residense, Plantation, Monkstown, co. Dublin, Wm. Plant, M.D., J.P., aged 85.

Pullan.—On the 2nd November, at Epworth, Lincolnshire, Richard Pullan, M.R.C.S.E., formerly Assistant Surgeon R N., aged 82.

Reid.—On the 15th October, at St. James's Road, Wandsworth Common, Maria Augusta, widow of James Reid, M.D., of Brook Street, Grosvenor Square, aged 71.

Sarvis.—On the 4th November, Thomas Sarvis, M.D., of Bethnal Green Road, Medical Officer of Health for Bethnal Green, aged 54.

Simpson.—On the 3rd November, at Priestley Road, Warwick, John H. Simpson, Surgeon, aged 68.

Spencer.—On the 1st November, at Stoke Newington, John Spencer, M.R.C.S.E., aged 61.

Tailer.—On the 7th September, at Walton, Suffolk, George W. Tailer, M.R.C.S.E., aged 59.

Tucker.—On the 1st October, at Sligo, James Tucker, M.D., Surgeon Sligo Rifles.

Walker.—On the 7th November, at Lee, Kent, Wm. Holmes Walker, M.R.C.S., aged 59.

Wilby.—On the 25th October, at Leicester, J. B. Wilby, L. .C.P.L., aged 38

Wrangham.—On the 21st October, at Wragby, Lincolnshire, J. D. Wrangham, M.D. aged 59.

(*a*) This confection, which consists of an immense variety of aromatic substances, was once officinal, and is to be found in the Ph. Lond., 1746.

(*b*) Dr. Warburg informs me that this ingredient was added to correct the otherwise extremely acrid taste of the tincture. Many other substances were tried, but none answered so well as prepared chalk.

(*c*) This is the Polyporus laricis (P. officinalis, Boletus purgans, or Larch agaric), "formerly," says Pereira, "used as a drastic purgative, and still kept by the herbalist."

Dec. [illegible]
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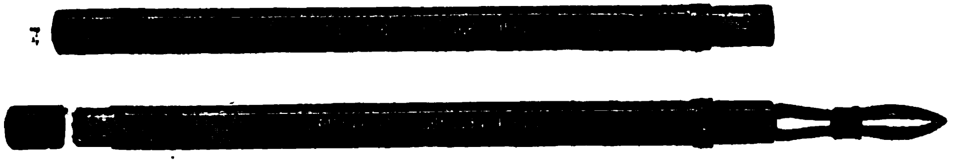

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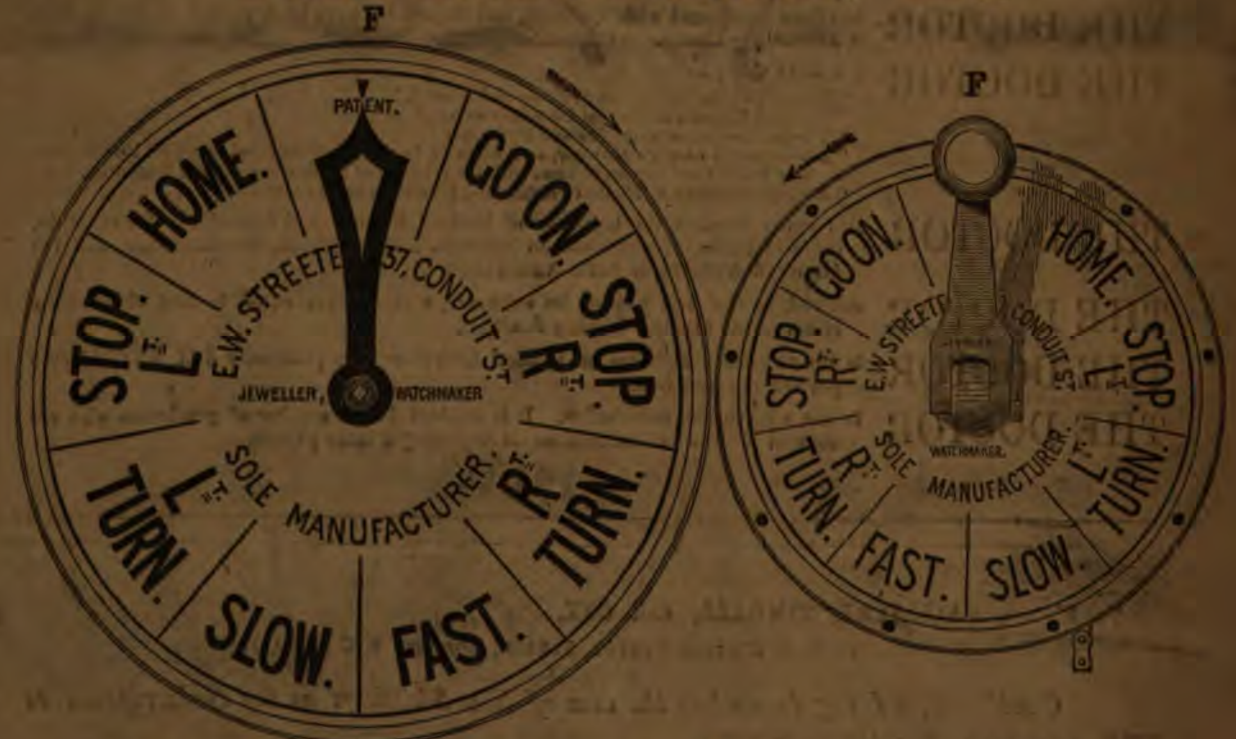

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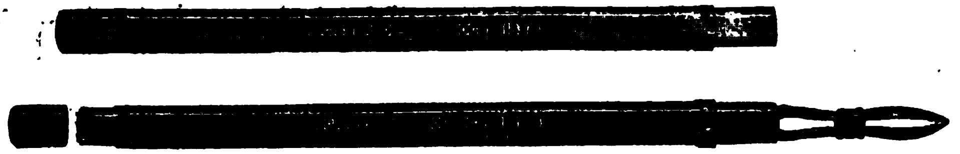

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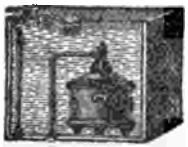

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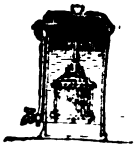

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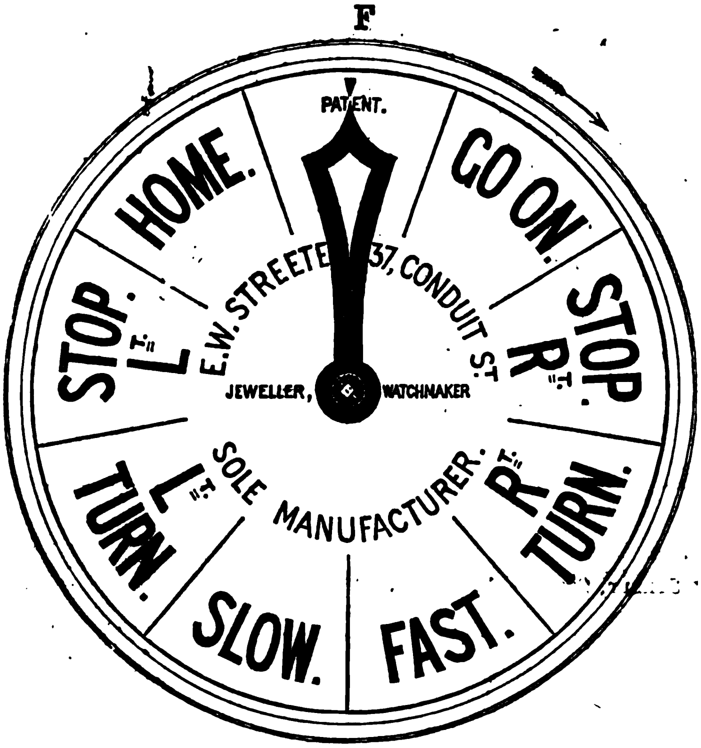

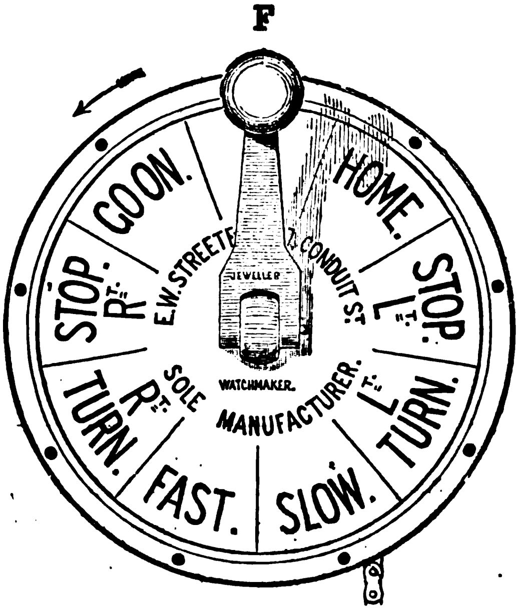

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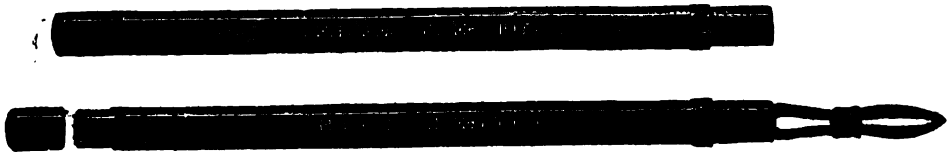

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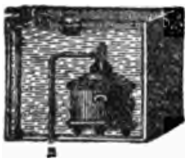

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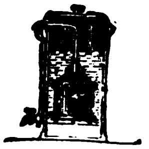

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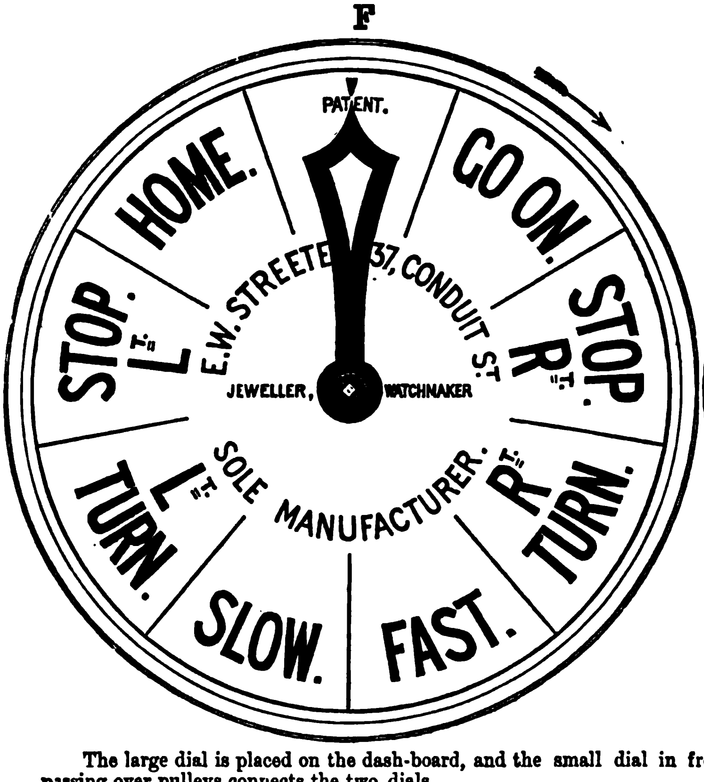

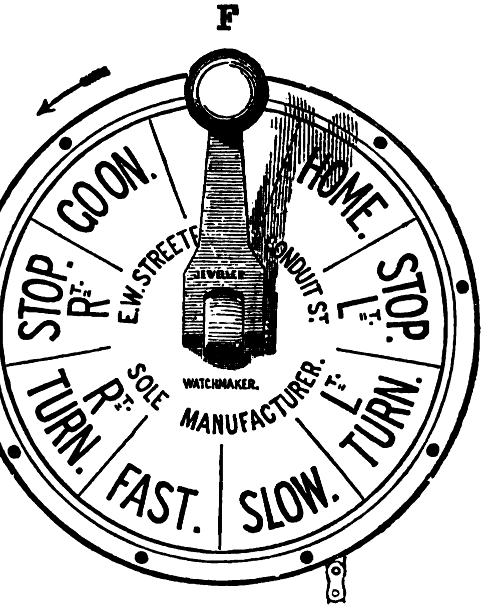

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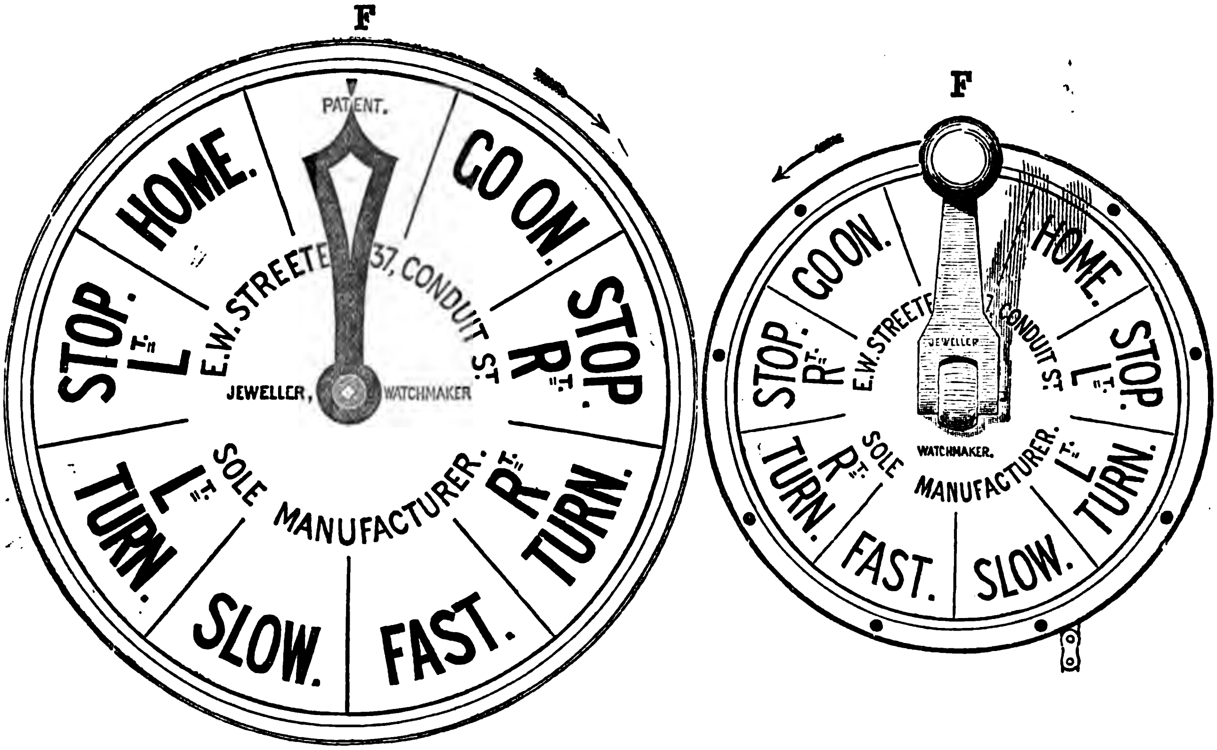

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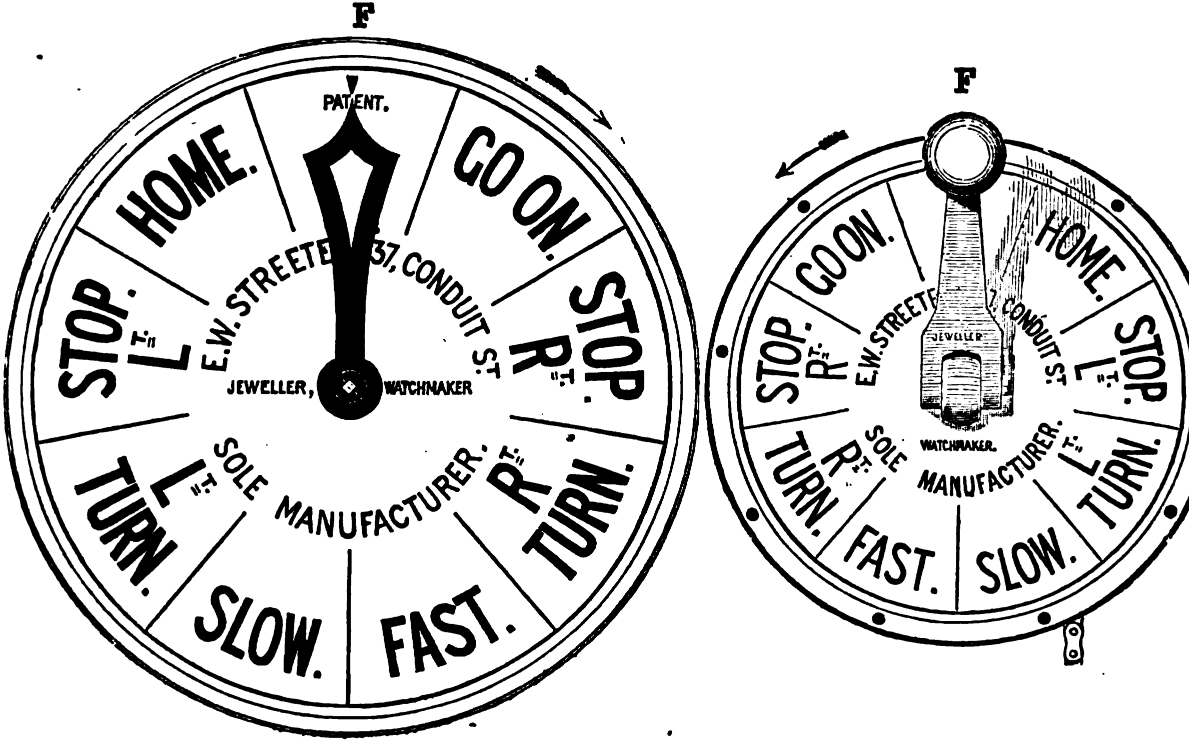

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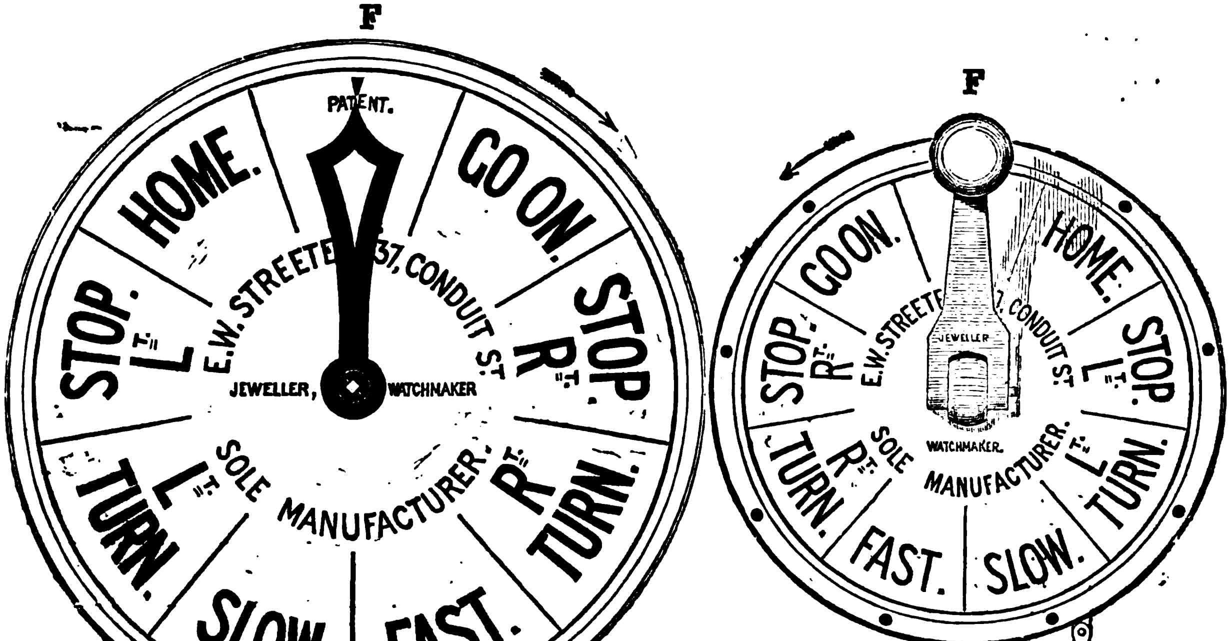
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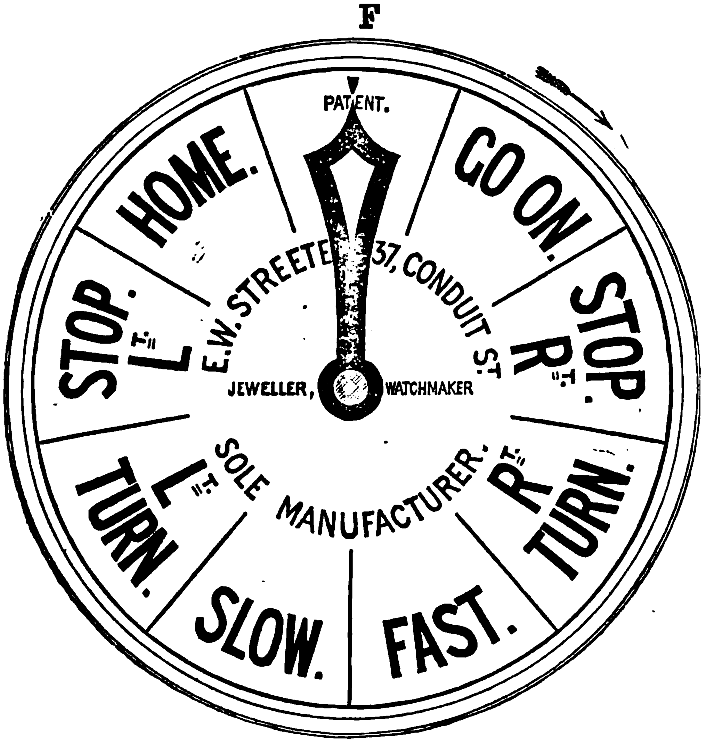

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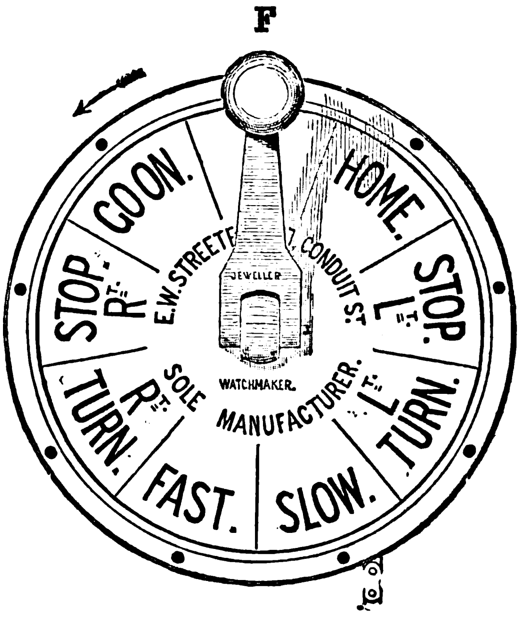

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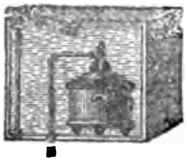

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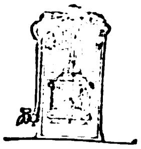

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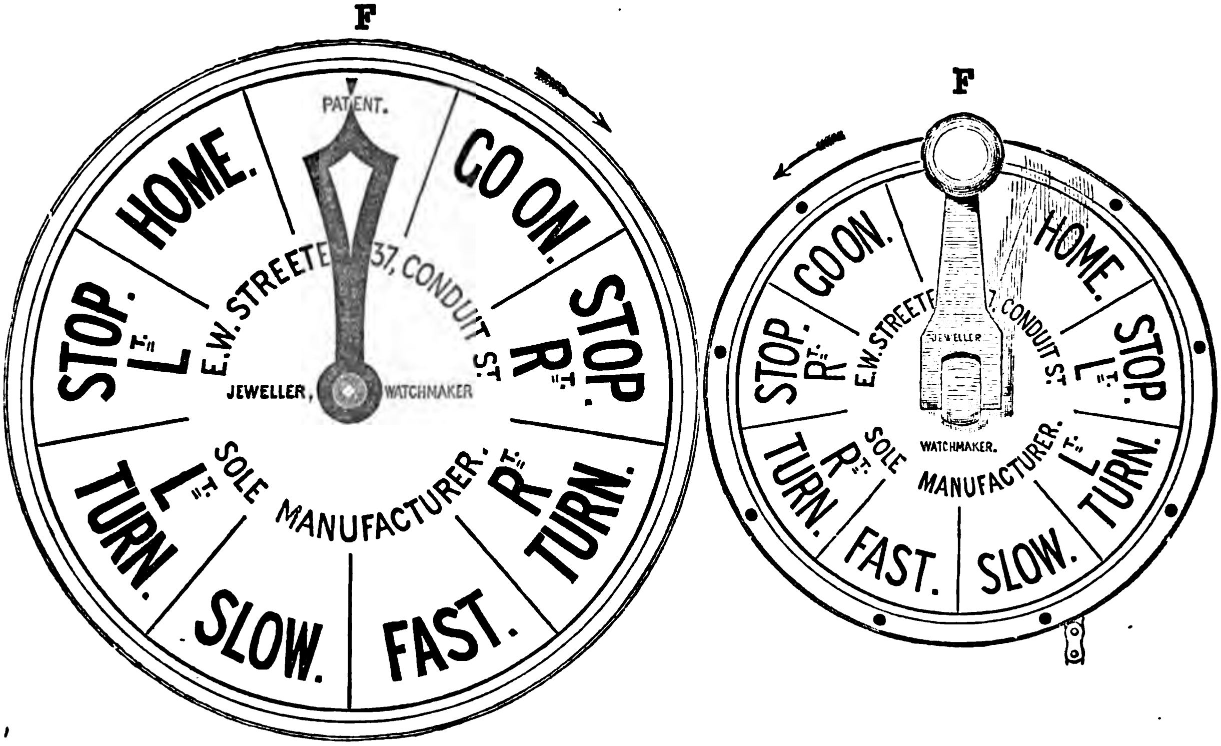

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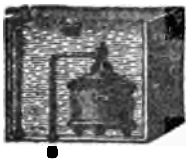

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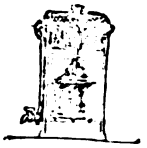

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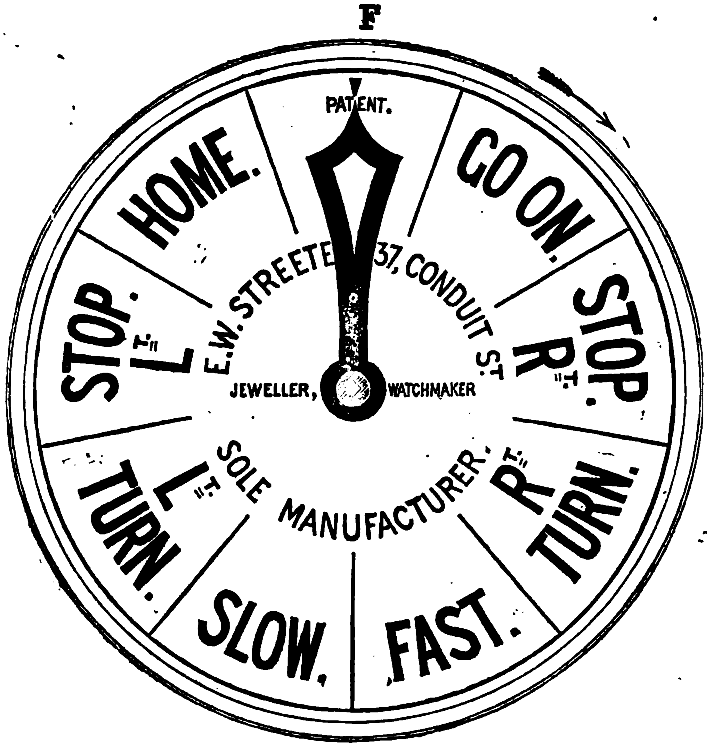

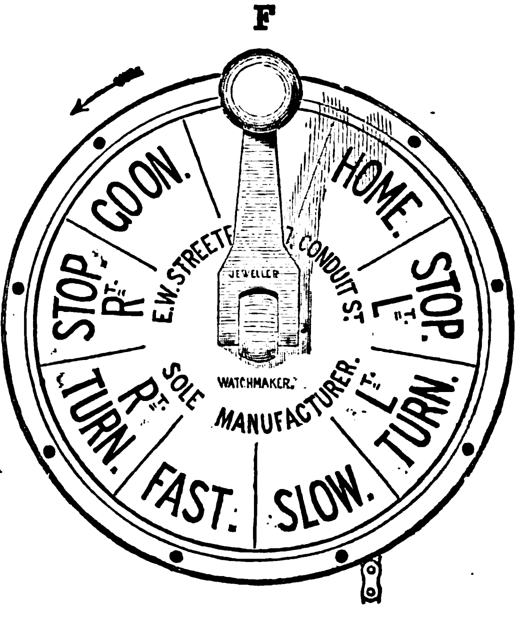

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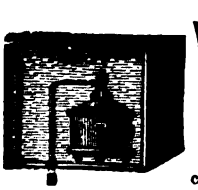

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